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Nutrition in Adolescent Girls and Barriers to Effective Policy Action in South Asia

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Cover caption: Adolescent schoolchildren receiving an iron and folic acid supplement under the supervision of a schoolteacher.

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Contents

Summary

Children, guided by a schoolteacher, help plant and harvest nutritious vegetables in their school garden.

South Asia is home to an estimated 172 million adolescent girls aged 10–19 years, the largest cohort of any region in the world. The nutrition of adolescent girls has long-lasting consequences on their well-being and productivity as well as on the health of their potential offspring for those who will have children.

A decade ago, an estimated 55 per cent of adolescent girls aged 15–19 years in South Asia were affected by anaemia, 19 per cent by underweight, 7 per cent by overweight or obesity and 11 per cent by short stature. There is, however, limited regional literature synthesizing the latest estimates of the nutritional status of adolescent girls in South Asia. There is also limited system-focused research capturing constraints experienced by decision-makers and programme managers in implementing adolescent nutrition interventions through national programmes and multiple system delivery platforms.

We examined and provide updated estimates of the nutritional status of adolescent girls aged 10 to 19 years and the delivery of nutrition services and support to them. We also examined trends over time and subnational and economic disparities in these outcomes. We collected the perspectives of decision-makers on policy and programme bottlenecks and priority actions needed to improve the nutrition of adolescent girls in the region.

We used a mixed methods approach and conducted this study between January 2023 and February 2025. We reviewed 28 national survey reports and multi-country research papers and analysed data from 22 national surveys covering the period 2009–2023 across the eight South Asian countries – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. We developed a qualitative tool, which was executed through seven participatory country workshops and a regional conference, engaging with 100 stakeholders. These meetings examined the availability of national policies, legal measures and programmes to deliver 12 adolescent nutrition interventions across five domains: (i) access to nutritious foods; (ii) micronutrient supplementation and deworming prophylaxis; (iii) nutrition and lifestyle education; (iv) healthy food environments; and (v) nutritional status assessment and special services for those at nutritional risk.

We identified constraints to policy and programme delivery across six system building blocks: legislation and policies; leadership, governance and coordination mechanisms; supplies; budgets and financing; data and information systems; and workforce. Finally, we identified priority actions for each country to improve adolescent nutrition.

We found 1 in 10 adolescent girls were affected by either both underweight and anaemia or by both overweight/obesity

and anaemia and that at least one in four suffered from four micronutrient deficiencies (iron, folate, vitamin D and zinc). Widespread geographic disparities were evident both between and within countries. None of the eight countries had policies for all 12 interventions but five countries (Bangladesh, Bhutan, India, Nepal and Sri Lanka) had both policies and programmes to deliver at least six interventions countrywide.

Despite a positive policy environment in most countries, programmes were constrained to deliver a package of nutrition services for adolescent girls and failed to protect the food environment in and around schools. Workshop participants reported moderate to significant constraints in most of the six system building blocks, especially in the lack of recent data on the delivery of most interventions for the age group 10–14 years and on the prevalence of micronutrient deficiencies.

We recommend three priority actions. **Firstly,** address data deficiencies by providing survey and surveillance-based evidence on the prevalence and coverage of nutrition interventions for adolescent girls aged 10–19 years, which should be designed to unmask disparities. **Secondly,** initiate measures to strengthen legal frameworks for healthy food environments in and around schools, as well as their enforcement and monitoring. **Thirdly,** conduct a system bottleneck analysis with country decision-makers at all levels through participatory workshops as they can help build consensus on priority actions. Such analyses will support addressing weaknesses and actions at different administrative levels, which can unmask subnational estimations of gaps and priorities while programme planning.

Report

Children eating their midday meal at school.

South Asia is home to an estimated 172 million adolescent girls aged 10–19 years, the largest cohort of any region in the world.[1] The nutrition of adolescent girls has long-lasting consequences on their well-being and productivity as well as on the health of their potential offspring for those who will have children.[2]

Introduction

In 2014, the South Asian Association for Regional Cooperation (SAARC) developed the Regional Action Framework for Nutrition,[3] urging member countries to advance nutrition rights for children and women, including adolescent girls, through affirmative actions in policies, legal measures and programmes. The framework emphasized the need to utilize multiple service delivery platforms (health, social protection, education and food safety nets) and a mix of system strategies, such as garnering political commitment, enhancing human and institutional capacity for programme management and fostering accountability through monitoring and reporting frameworks.[4]

A decade ago, an estimated 55 per cent of adolescent girls aged 15–19 years in South Asia were affected by anaemia, 19 per cent by underweight, 7 per cent by overweight or obesity and 11 per cent by short stature.[5,6]

It has been over 10 years since member states were urged to adopt the 2014 SAARC framework on nutrition. Presently, global leaders are reviewing progress against the World Health Assembly 2030 targets for nutrition, including reducing anaemia in reproductive-aged women and adolescent girls.[7] Currently, there is limited system-focused research capturing constraints experienced by decision-makers and programme managers in implementing adolescent nutrition interventions through national programmes and multiple system delivery platforms. There is also limited regional literature synthesizing the latest estimates of the nutritional status of adolescent girls in South Asia.

This report provides updated country-specific and regional estimates of the nutritional status of adolescent girls in the eight countries of the South Asia region – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and

Sri Lanka. Applying a health system building block analysis approach to nutrition programmes, the report examines whether proven adolescent nutrition interventions are included in national adolescent policies and programmes. For countries with existing policies and programmes, the report provides the perspectives of national programme decision-makers on the constraints to effective service delivery and programme coverage across six system building blocks: (i) legislation and policies; (ii) leadership, governance and coordination; (iii) supplies; (iv) budgets and financing; (v) data and information systems; and (vi) workforce. Country-wise priority actions are also summarized based on these building blocks, along with mechanisms to support implementation and periodic review of progress on the agreed priority actions.

Methodology

The study was conducted in eight steps (*see Table 1*) undertaken between January 2023 and February 2025. The study focused on adolescent girls (aged 10–19 years) in the eight South Asian countries – Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. To arrive at estimates of prevalence, trends and disparities in nutritional risks in adolescent girls, we listed the globally recommended indicators of nutritional status (underweight, overweight, obesity, short stature, anaemia and micronutrient deficiencies) and mapped their availability in nationally representative cross-sectional surveys, country-wise. We also mapped the availability of indicators related to dietary practices and physical activity in these surveys.

Table 2 lists the indicators, their definitions and data sources included in the study. Data sets for country estimates included:

(i) Afghanistan: National Nutrition Survey (NNS), 2013,[8] and Global School-Based Student Health Survey (GSHS), 2014.[9]

(ii) Bangladesh: National Micronutrient Survey (NMS), 2011–2012;[10] Bangladesh GSHS, 2014;[11] and Demographic and Health Survey (DHS), 2011,[12] 2017–2018[13] and 2022.[14]

(iii) Bhutan: NNS, 2015;[15] GSHS, 2016;[16] Non-Communicable Disease (NCD) Risk Factor Collaboration, 2016;[17] and Bhutan Fifth National Health Survey (NHS), 2023.[18]

(iv) India: Comprehensive National Nutrition Survey (CNNS), 2016–2018,[19] and National Family Health Survey (NFHS), 2015–2016[20] and 2019–2021.[21]

(v) Maldives: DHS, 2009[22] and 2016–2017,[23] and GSHS, 2009[24] and 2014.[25]

(vi) Nepal: GSHS, 2015;[26] Nepal National Micronutrient Status Survey (NNMSS), 2016;[27] and DHS, 2016[28] and 2022.[29]

(vii) Pakistan: GSHS, 2009,[30] and NNS, 2018.[31]

(viii) Sri Lanka: DHS, 2016;[32] GSHS, 2016;[33] National Nutrition and Micronutrient Survey (NNMS), 2017[34] and 2022.[35]

Prevalence estimates were calculated for each indicator and socioeconomic and subnational disparities in the prevalence estimates were analysed where data sets

were publicly available. Where data sets were not publicly available, estimates were taken from publicly available reports. Secondary analysis was undertaken using Stata version 17 with adjustment for sample weights.[36] Data were pooled to calculate regional estimates, weighted by the size of each country's adolescent population, for girls aged 10–19 years or 15–19 years based on the age group for which data were available (*see Figures 1 to 5*).

We examined the availability of national policies, legal measures and programmes to deliver 12 adolescent nutrition interventions[37] clustered around five domains (*see Table 3*): (i) access to nutritious foods, in schools and beyond; (ii) micronutrient supplementation and deworming prophylaxis; (iii) nutrition and lifestyle education; (iv) healthy food environments, in and around schools; and (v) nutritional status assessment and screening and a special nutrition package for adolescent girls at nutritional risk.

The detailed mapping of existing policies and programmes against each intervention for the eight South Asian countries can be referred to in Annex 2. If the nutrition intervention was delivered through a programme, we examined constraints in effective implementation of the six system building blocks: (i) legislation and policies; (ii) leadership, governance and coordination; (iii) supplies; (iv) budgets and financing; (v) data and information systems; and (vi) workforce. For classification of the severity of bottlenecks, we developed a system bottleneck classification tool (*see Annex 3*).

The system bottleneck classification tool was executed through participatory country-specific workshops involving 100 stakeholders (6–16 per country) from seven countries (all except India). In India, classification was done by the research team. Country profiles were created and used by country teams to gather input, refine and validate the information with decision-makers, programme managers and development partners. Country teams used the tool in the country meetings to classify the severity of the bottleneck (mild, moderate or significant).

Finalized country profiles, found in Annex 1 and updated with the latest data available, were used to consolidate and triangulate the regional landscape (*see Tables 4–6*). Subsequently, the country teams and country government decision-makers were invited to a regional conference on 'Nourishing South Asia: Scaling-up Equitable Nutritional Care for Girls and Women in South Asia',[38] held on 18–20 September 2023, to discuss the severity of bottlenecks and identify priority actions. The methodology for identifying priority actions was open space technology, a participatory meeting format that allows participants to control the agenda around a given topic.[39–41]

The priority actions identified by the conference participants were analysed using a framework analysis,[42,43] which is a qualitative method used to inductively generate common and divergent themes within qualitative data[43] by developing a matrix output of rows (generally cases but in this study, interventions) and columns

(themes/codes), where each 'cell' contains a summary of the qualitative data.[42] After the regional conference, country teams reviewed their identified priority actions and initiated a process of engaging country decision-makers to continue including missing components or strengthening existing components as part of their national commitments and plans. The analysis was updated in July 2024 and then again in February 2025 to reflect the latest information.

The study team comprised UNICEF adolescent nutrition focal points at national level, national government focal points managing relevant adolescent nutrition programmes and national academic experts engaged in policymaking from the eight South Asian countries. Regional conference participants included government decision-makers in adolescent nutrition programmes, development partners, national academic experts and physicians engaged in policymaking.

Results

Afghanistan

Data were available for only 13 of the 25 study indicators in Afghanistan and only 6 of the 15 nutritional status indicators (*see Table 2*). The Afghanistan NNS, 2013, report[8] indicated an 8 per cent prevalence of underweight and 12 per cent prevalence of overweight/obesity among adolescent girls aged 10–19 years (*see Figure A1.1*). The report also indicated that 31 per cent of adolescent girls had anaemia and 7 per cent had folate deficiency.

In addition, estimates of socioeconomic disparities presented in the NNS report suggested that those in the richest wealth quintile experienced double the prevalence of overweight as those in the poorest wealth quintile (richest: 14 per cent; poorest: 7 per cent) (*see Figure A1.2*).

Data were not available on the consumption of various food groups to compute minimum dietary diversity. The GSHS, 2014,[9] showed that 37 per cent of school-going girls aged 13–17 years had consumed carbonated soft drinks at least once per day in the last 30 days, 57 per cent had eaten at a fast food restaurant in the last week and only 10 per cent had been physically active for at least 60 minutes per day in the week preceding the survey.

While 6 of the 12 interventions studied are included in policies (*see Table 4*), many school-based programmes have been halted. School meal and deworming interventions are provided in all schools in seven provinces to girls aged 10–13 years who are permitted to attend school. Weekly iron and folic acid supplementation is being delivered by community health workers to girls living near Health Posts through a doorstep community-based programme across all 34 provinces.[44] The programme is monitored by donor-supported programme management information systems (*see Table 5*) and financed through multilateral agencies. For girls aged 10–13 years who can still attend school, resuming the school-based delivery of supplements will be key for improved coverage in this age group.

Regional conference participants shared that their priority action was to continue to improve coverage of the weekly iron and folic acid supplementation programme to all 34 provinces through

pooled funding from donor agencies and increased compliance and demand for iron and folic acid supplementation. The Afghanistan country profile is found in Annex 1.

Bangladesh

Information was available for 24 of the 25 study indicators in Bangladesh (*see Table 2*). The raw data sets from the Bangladesh DHS, 2017–2018[13] and 2022,[14] were used to calculate anthropometric indicators, including underweight, overweight and short stature, among adolescent girls. In terms of trends, the proportion of underweight girls aged 15–19 years remained unchanged between 2018 and 2022 (5 per cent in 2018 and 4 per cent in 2022) but the proportion of those with short stature almost halved (11 per cent in 2018 and 6 per cent in 2022). Over the same period, the proportion of individuals classified as suffering from overweight or obesity increased (12 per cent in 2018 and 15 per cent in 2022) (*see Figure A1.5*). The raw data set from the Bangladesh DHS 2011[12] was used to calculate the proportion of adolescent girls aged 15–19 years with anaemia but data were only available for married girls (42 per cent).

Bangladesh has undertaken two rounds of NMS, 2011–2012[10] and 2019–2020,[45] which provide prevalence estimates of micronutrient deficiencies (vitamin A, vitamin D, vitamin B12, folate, zinc, iron, iodine) and anaemia among those aged 6–14 years and 15–19 years. However, the survey report and raw data were publicly available only for 2011–2012 to arrive at prevalence estimates for adolescent girls aged 10–19 years. Of the six micronutrient deficiencies studied,* 66 per cent, 19 per cent and 5 per cent of adolescent girls aged 10–19 years had at least one, two and three micronutrient deficiencies, respectively (*see Figure A1.8*).

The NMS, 2011–2012, provided estimates on dietary practices based on the adolescent girls' recall of their consumption of various food groups in the week preceding the survey. About 80 per cent of adolescent girls aged 10–19 years had minimum dietary diversity, i.e., they consumed at least five out of nine food groups. Less than half of adolescent girls reported consuming fruits at least two times per day and vegetables at least three times per day on a typical day in the past week (*see Figure A1.11*). Using data from the Bangladesh GSHS, 2014,[11] 47 per cent of girls aged 13–17 years consumed carbonated soft drinks one or more times per day during the 30 days before the survey, 47 per cent had eaten at a fast food restaurant on at least one day in the last week and 40 per cent of girls were physically active at least 60 minutes per day in the week preceding the survey.

Subnational differences in the prevalence of underweight were small for both 2018 and 2022 (5 pp in 2018 and 5 pp in 2022).[13,14] Between 2018 and 2022, subnational differences increased for short stature (8 pp in 2018 and 12 pp in 2022) and decreased for overweight (14 pp in 2018 and 9 pp in 2022) (*see*

* There were no raw data on vitamin D in NMS, 2011–2012.

Figure 5). In 2018 and 2022, the difference in the prevalence of underweight and short stature in the poorest/poor and rich/richest wealth quintiles was small (5 pp) but larger (9–11 pp) for overweight (*see Figure A1.9*).

The Bangladesh Second National Plan of Action for Nutrition, 2016–2025,[46] National Strategy on Prevention and Control of Micronutrient Deficiencies, 2015–2024,[47] Adolescent Health Strategy, 2017–2030,[48] and Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases, 2018–2025,[49] reflect positive policy commitments to deliver 10 of the 12 interventions included in the study (*see Table 4*). Six of the ten interventions are delivered countrywide through government-funded programmes. However, not all cover the entire age group of 10–19 years, for example, deworming covers adolescents aged 13–19 years and school meals are provided only up to the primary school age group (up to 11 years) and implemented in selected geographies. Similarly, the biannual assessment using BMI-age-Z score growth charts, while provided for in policy,[48] is implemented only in selected geographies.

Programme information systems capture only four of six interventions implemented through countrywide programmes (*see Table 5*). Table A1.2 details the number and severity of system bottlenecks in implementing the six interventions through universal programmes. Bottlenecks were found in at least two of four system building blocks (supplies, budgets and financing, data and information systems and work force) for all six interventions and significant or moderate bottlenecks were found in all these four building blocks for four interventions (school meals, physical activity, BMI-for-age Z score growth charts and social protection).

Key priority actions identified by regional conference participants were to address the data gaps in survey, programme monitoring and surveillance platforms and strengthen the nutrition-sensitive social protection schemes for adolescent girls identified at nutritional risk. The Bangladesh country profile is found in Annex 1.

Bhutan

Data were available for 16 of the 25 nutritional status indicators in Bhutan (*see Table 2*). Approximately one in seven adolescent girls aged 15–19 years were either underweight (7 per cent) or overweight (8 per cent) in Bhutan, as indicated by estimates for 2016 (*see Figure A1.13*).[17] The Bhutan NHS, 2023, report[18] indicated that 36 per cent of adolescent girls had anaemia. However, raw data were not available to provide socioeconomic and subnational geographic disparities in prevalence estimates for nutritional status.

The Bhutan NHS, 2023, report[18] provided data on the prevalence of several micronutrient deficiencies among adolescent girls aged 10–19 years (iron: 56 per cent, folate: 32 per cent, vitamin A: 0.2 per cent, vitamin D: 96 per cent, vitamin B12: 26 per cent, vitamin B1:

2 per cent, vitamin B2: 11 per cent, calcium: 11 per cent). Moreover, according to the Bhutan GSHS, 2016,[16] as high as 40 per cent of school-going adolescents consumed sweetened beverages daily and only 13 per cent of students were physically active for at least 60 minutes per day in the week preceding the survey.

Six of the twelve interventions studied are included in both Bhutan's nutrition and health policy instruments as well as programmes (*see Table 4*). Bhutan's supply and budgetary allocations for rice fortification in school meals and school nutrition education are noteworthy. However, affirmative policies and programme actions are lacking to implement nutrition-sensitive social protection interventions and a ban on marketing and sale of junk food in and around school premises. Programme monitoring systems provide information on only three of the six interventions (school meals, weekly iron and folic acid supplementation and preventive deworming) (*see Table 5*).

Regional conference participants cited moderate/significant system bottlenecks in budgetary provisions and data systems and prioritized strengthening school-based nutrition services and education as a key priority action. The Bhutan country profile is found in Annex 1.

India

India had nationally representative survey data for 24 of the 25 study indicators (*see Table 2*). The data were sourced from three surveys – two rounds of NFHS (2015–2016 and 2019–2021),[20,21] which were used for estimating disparities and trends at subnational levels, but only for the age group 15–19 years, and one round of the CNNS (2016–2018),[19] which provided data on micronutrient status and dietary practices for the age group 10–19 years. In 2021, 10 per cent of girls aged 15–19 years were underweight (unchanged since 2016), 7 per cent overweight (5 per cent in 2016), 59 per cent anaemic (54 per cent in 2016) and 14 per cent short statured (13 per cent in 2016) (*see Figures A1.18 and A1.19*), with subnational differences between states (17 pp for underweight, 16 pp for overweight/obesity and 49 pp for anaemia) (*see Figure 5*).

According to the CNNS, 2016–2018,[19] 86 per cent, 51 per cent and 21 per cent of adolescent girls aged 10–19 years had at least one, two and three micronutrient deficiencies, respectively, of six micronutrient deficiencies (*see Figure A1.21*). Nonetheless, 62 per cent of girls aged 10–19 years met the minimum dietary diversity (≥5 food groups). However, only 35 per cent consumed iron-rich food and as high as 40 per cent consumed unhealthy foods (aerated drinks, junk food, sweets and fried foods) while screen time increased and physical activity decreased with increasing age (*see Figures A1.25 and A1.26*).[50]

India has policies to deliver all 12 interventions except for front-of-pack labelling and reducing the amount of screen time (<120 minutes/day) (*see Table 4*). Seven of the twelve interventions are universally delivered countrywide through two national flagship

programmes, the Anaemia Free India Programme[51] and the School Health Programme,[52] by three ministries (Health and Family Welfare; Women and Child Development; and Education), with detailed implementation mechanisms for service delivery and monitoring of key performance indicators. However, the large population, subnational disparities and variable subnational governance mechanisms adversely affect service coverage and continuity.

India's programme information systems provide monthly programme coverage data for three of the seven universally implemented interventions (school-based midday meals, weekly iron and folic acid supplementation and biannual deworming) (*see Table 5*). However, the lack of an integrated programme monitoring system (owing to implementation by different ministries) prevents obtaining coverage data for these three interventions through one portal.

The regional conference stakeholders prioritized integrating the monitoring of the remaining universally implemented interventions (nutrition and health education in schools and beyond, physical activity and a ban on marketing and sale of junk food in and around school premises) in existing programmes and strengthening integrated information systems to support review and improve coverage and quality. The India country profile is found in Annex 1.

Maldives

Data were available for 13 of the 25 study indicators (*see Table 2*). In 2017, 14 per cent of adolescent girls aged 15–19 years in Maldives were underweight (10 per cent in 2009), 19 per cent overweight/obese (24 per cent in 2009), 4 per cent short statured (8 per cent in 2009)[22,23] and 60 per cent anaemic[23] (*see Figures A1.27 and A1.28*), with the magnitude of subnational disparities varying in these estimates (16 pp for underweight, 8 pp for overweight and 18 pp for anaemia). In 2017, the differences in nutritional status between the poorest/poor and rich/richest wealth quintiles in girls aged 15–19 years were small (4 pp) (*see Figures A1.29 and A1.30*).[23]

Data on micronutrient deficiencies were not available. Using data from the Maldives GSHS, 2009[24] and 2014,[25] it was found that while the proportion of girls meeting the recommended intake for fruit (17 per cent in 2009 and 2014) and vegetables (8 per cent in 2009 and 7 per cent in 2014) was low and had remained the same over time, there was an increase in the proportion of girls eating food from a fast food restaurant at least once per week (30 per cent in 2009 and 35 per cent in 2014). As high as 30 per cent of girls consumed carbonated soft drinks once or more daily in both 2009 and 2014 (*see Figure A1.31*). According to the Maldives GSHS, 2009,[24] only 17 per cent of students engaged in physical activity for at least 60 minutes per day in the week preceding the survey.

Of the 12 interventions studied, only the deworming programme is being conducted as a voluntary programme owing to the low worm load (4 per cent of any soil-transmitted infection in preschool

children), in which deworming is provided only with the parents' consent, as some parents give deworming tablets at home on the advice of individual doctors or by parents themselves.[53]

Four of the twelve interventions are included in both policies and programmes and implemented mainly through schools as a service delivery platform (*see Table 4*). National survey data included coverage of two of these four interventions (physical activity and nutrition assessment) and school-based programme information systems provided information on only one intervention (school meals) (*see Table 5*). Country teams identified moderate/significant bottlenecks across at least four system building blocks (supplies, budgets, data and information systems and work force) for all four interventions.

Regional conference participants identified addressing data gaps and initiating micronutrient supplementation as priority actions. The Maldives country profile is found in Annex 1.

Nepal

Information was available for 23 of the 25 study indicators from four national surveys for adolescent girls aged 15–19 years – GSHS, 2015;[26] NNMSS, 2016;[27] DHS, 2016[28] and 2022[29] (*see Table 2*). Among girls aged 15–19 years, the prevalence of underweight was 5 per cent in 2022 (4 per cent in 2016), overweight/obesity was 6 per cent (5 per cent in 2016), short stature was 9 per cent (10 per cent in 2016) and anaemia was 39 per cent (44 per cent in 2016) (*see Figures A1.33 and A1.34*).[28,29] Socioeconomic disparities were modest but estimates varied between provinces (6 pp for underweight, 10 pp for overweight and 30 pp for anaemia) (*see Figure 5*).[28,29]

Approximately one in five girls aged 10–19 years had iron deficiency and one in four girls aged 15–19 years had zinc deficiency (*see Figure A1.35a*).[27] Almost one in two (47 per cent) did not have minimum dietary diversity (≥5 food groups). Only 47 per cent consumed iron-rich foods and as high as 71 per cent consumed unhealthy foods, such as aerated drinks, junk food and fried foods, in the day before the survey.[29] The GSHS, 2015,[26] showed that 43 per cent of students attended physical education classes three or more days a week in the school year but only 13 per cent were physically active for at least 60 minutes per day in the week preceding the survey (*see Figure A1.39*).

Nepal has policies in place to deliver 10 of the 12 interventions reviewed in the study. Of these, seven are delivered through government-funded programmes anchored by the Ministries of Health and Education (*see Table 4*). However, the programme management information system provides coverage data for only four of the seven interventions (*see Table 5*) and two of the four interventions had at least one system bottleneck.

Regional conference stakeholders identified initiating the remaining 5 of the 12 interventions, all of which fell under the 'healthy food environments, in and around

schools' domain, as their priority through a joint action plan between the education and health ministries. The Nepal country profile is found in Annex 1.

Pakistan

Information on 22 of the 25 study indicators was available through two surveys, GSHS, 2009,[30] and NNS, 2018,[31] which focused on adolescents aged 13–17 years and 15–19 years, respectively (*see Table 2*). Data for indicators from more than one time point were not available to provide trends. According to NNS, 2018,[31] 10 per cent of girls aged 15–19 years were underweight, 15 per cent overweight/obese, 11 per cent short statured and 52 per cent anaemic (*see Figures A1.40 and A1.41*).

The prevalence of underweight was 12 per cent among the poorest/poor and 8 per cent among the rich/richest wealth quintiles, overweight 12 per cent among the poorest/poor and 18 per cent among the rich/richest, short stature 14 per cent among the poorest/poor and 7 per cent among the rich/richest and anaemia 55 per cent among the poorest/poor and 50 per cent among the rich/richest (*see Figures A1.43 and A1.44*).[31] Subnational geographical disparities were small for underweight (9 pp) but significant for overweight (25 pp) and anaemia (39 pp).[31]

The NNS, 2018,[31] also showed that 38 per cent of girls aged 15–19 years had iron deficiency and 24 per cent, 79 per cent and 40 per cent had zinc, vitamin D and iodine deficiencies, respectively. The same survey showed that only 26 per cent of girls aged 15–19 years had minimum dietary diversity and only 39 per cent consumed iron-rich food the previous day (*see Figure A1.45*). According to the GSHS, 2009,[30] physical inactivity was high with only 13 per cent of school-going girls aged 13–17 years physically active for at least 60 minutes per day in the week preceding the survey.

There are policies for implementing 9 of the 12 interventions but only one is implemented and monitored through a countrywide programme (preventive deworming), while the remaining eight are implemented in some provinces (*see Table 4*). Only five of the nine interventions are monitored as part of routine programme monitoring systems (*see Table 5*). All nine implemented interventions had moderate/significant implementation bottlenecks in four or more of the six system building blocks.

Regional conference stakeholders prioritized scaling up the nine interventions across all provinces and addressing legislative and policy bottlenecks to regulate the marketing and sale of unhealthy food in the school food environment. The Pakistan country profile is found in Annex 1.

Sri Lanka

Information was available on 20 of the 25 study indicators through four surveys (*see Table 2*). However, age groups and methodology varied across the four surveys, posing difficulty in deriving

comparisons and trend analyses: 15–19 years (DHS, 2016),[32] 13–17 years (GSHS, 2016),[33] 10–18 years (NNMS, 2017)[34] and 10–17 years (NNMS, 2022).[35] The latest estimates from NNMS, 2022,[35] showed that 23 per cent of adolescent girls aged 10–17 years were underweight, 11 per cent overweight/obese, 11 per cent short statured and 15 per cent anaemic (*see Figures A1.47 and A1.48*).

The NNMS, 2017,[34] showed that 32 per cent of adolescent girls had iron deficiency, 0.2 per cent had vitamin A deficiency, 19 per cent had vitamin D deficiency and 30 per cent had zinc deficiency (*see Figure A1.49a*). The NNMS, 2022, showed that 7 per cent had iron deficiency. Data from the GSHS, 2016,[33] showed that 44 per cent of school-going adolescent girls had eaten at a fast food restaurant at least once in the last week and 24 per cent had consumed carbonated soft drinks at least once per day in the last 30 days. Only 12 per cent of school-going girls aged 13–17 years were physically active for at least 60 minutes per day in the week preceding the survey.[33]

The DHS, 2016,[32] data set was used to compute economic and subnational analyses, although the small sample size means disaggregated estimates should be interpreted cautiously. The prevalence of underweight was 11 per cent in the poorest/poor and 0 per cent in the rich/richest wealth quintiles, while the prevalence of overweight/obesity was 35 per cent in the rich/richest and 22 per cent in the poorest/poor wealth quintiles.

The National Nutrition Policy of Sri Lanka, 2021–2030,[54] National Strategy for Prevention and Control of Micronutrient Deficiencies in Sri Lanka, 2017–2022,[55] and National Strategic Plan on Adolescent and Youth Health, 2018–2025,[56] cover 11 of the 12 nutrition interventions (*see Table 4*). Sri Lanka does not have a universal deworming programme, owing to the very low worm load. In practice, 10 of the 11 interventions are delivered through national flagship programmes countrywide, of which five are monitored through programme monitoring systems (*see Table 5*). Survey data on coverage of the 11 interventions are scanty and not always available for public use or discussion. The only data available were from NNMS, 2022,[35] which indicated that 21 per cent of girls aged 10–17 years received weekly iron and folic acid supplementation in the six months preceding the survey, and the GSHS, 2016,[33] which recorded data on physical activity.

Collecting, using and disseminating data through surveys and programme monitoring systems emerged as a key bottleneck as well as increasing coverage of school-based nutrition services, particularly the interventions under healthy food environments in and around schools.

The regional conference stakeholders prioritized initiating interventions to address the adoption of affordable, high quality, acceptable and healthy food habits among adolescents. The Sri Lanka country profile is found in Annex 1.

Discussion

Several important findings emerged from this study:

1. Recent anthropometric data are often not available across the full adolescent age range of 10–19 years. Nonetheless, the available data reviewed in this study suggest that the South Asia region is experiencing a slight decline in the proportion of underweight adolescent girls but an increase in the proportion of overweight girls. Presently, underweight, overweight or short stature each affect approximately 10 per cent of the population, while 58 per cent are affected by anaemia and approximately 18 per cent are concurrently affected by both anaemia and underweight, both anaemia and overweight, or both anaemia and short stature (*see Figures 1 and 2*).

   Disparities in the nutritional status of adolescent girls exist both between and within countries. For example, across the eight South Asian countries the prevalence of anaemia ranged between 15 and 60 per cent and the prevalence of overweight/obesity ranged between 6 and 24 per cent. Within countries, in India in 2021 and in Pakistan in 2018 the prevalence of short stature among adolescent girls in the top two (rich/richest) wealth quintiles (India: 9 per cent; Pakistan: 7 per cent) was half the prevalence experienced in the bottom two (poorest/poor) wealth quintiles (India: 18 per cent; Pakistan: 14 per cent).

2. There is also a paucity of data on micronutrient deficiencies, dietary practices and coverage of nutrition interventions. The available data, limited and variable, show that micronutrient deficiency estimates are inconsistent: iron (7–56 per cent in six countries), folate (4–34 per cent in five countries), vitamin D (19–96 per cent in four countries), vitamin A (0–17 per cent in five countries) and zinc (24–57 per cent in five countries) (*see Figure 3*). Pooling these data cautiously would suggest that at least one in four adolescent girls across the region are affected by each of four key micronutrient deficiencies: iron, folate, vitamin D and zinc. Only two countries (Bangladesh and India) have data on six or more micronutrient deficiencies investigated in this study. One in five girls in Bangladesh and one in two girls in India are simultaneously affected by two or more of these micronutrient deficiencies.

Data on diet diversity and iron-rich food consumption are available from only four countries (Bangladesh, India, Nepal and Pakistan) and indicate only 4 in 10 adolescent girls consume iron-rich foods weekly, except in Bangladesh where consumption is higher. There are very limited data on the coverage of nutrition intervention packages as part of routine programme monitoring systems.

3. The variability in metrics and age groups covered, unavailability of raw data in certain countries, use of different terminologies, indicator definitions, reference data and cut-off points and data gaps in surveys covering the entire adolescent age group of 10–19 years complicate the interpretation of data trends between and within countries. Greater standardization of anthropometric indicators and a commitment to more regular monitoring of nutritional status are required to support programme managers and policymakers in tracking trends across the region, thereby informing effective intervention design and commitment to national and global nutrition targets.

4. South Asian countries have several policies and some programmes in place but they are hindered by several system bottlenecks to deliver adolescent nutrition interventions effectively, such as the lack of data on delivery and monitoring (*see Table 6*). For example, several countries have a positive policy and programme environment for access to nutritious foods in schools, micronutrient supplementation, deworming, nutrition and health education and nutrition assessments (height, weight and haemoglobin). It is, however, not clear from the data available if the scope of some of these programmes are sufficiently wide to influence behaviours. Further, nutrition education in schools can also shape positive norms around food and nutrition and should be expanded to prevent all forms of malnutrition, including overweight and obesity.[57] Countries are also implementing school meal and/or school snack programmes to ensure children, particularly those living with socioeconomic disadvantage, have access to healthy foods.[57,58] However, some studies have shown these foods to be high in salt, sugar and/or fat.[59]

5. As self-regulation within the food industry is largely ineffective in reducing adolescent exposure to unhealthy food, data availability on exposure and the extent of enforcement becomes critical to support governments in holding food and beverage industry stakeholders accountable.[60,61] However, only some countries have policy guidance that reflects restrictions on television advertising for unhealthy foods (n=5), taxation of unhealthy foods (n=7) and nutrition front-of-pack labelling (n=3), but none of this translates into universal implementation except in Sri Lanka. For example in India, in

2017, there were 1,735 food advertisements on children's television channels, in which 89 per cent were for foods high in fat, salt and sugar.[62] In Sri Lanka, 78 per cent of 95 assessed television advertisements for food and beverage were targeted at children in 2015.[63] Exposure to food and beverage marketing via online gaming or social media requires particular attention given the rise of the use of mobile technology within the region.[61,64] However, no country has implemented programme action to limit screen time among adolescents and that remains a particularly vulnerable area for food and beverage companies to target adolescents.

Sri Lanka is the only country in South Asia that has mandatory front-of-pack labelling in place for unhealthy foods and beverages and a specific tax on sugary drinks based on the content of sugar in a beverage. However, the tax rate has reduced over time from 50 Sri Lankan cents per gram of sugar in 2017 to 30 Sri Lankan cents per gram in 2018. Recent observations suggest that the effectiveness of the tax may have diminished due to general increases in food prices across the system.[65] In Maldives, the government imposes an import tariff on energy and soft drinks, yet paradoxically, it is one of the few countries in the world to continue to subsidize sugar.[66]

6. Reaching adolescent girls with social protection interventions closer to their homes is critical yet missed out. While schools remain the key platform for service delivery, not all adolescent girls are in school: the proportion of girls who have never attended school range from 32 per cent in Pakistan[30] to ≤5 per cent in Bangladesh, India and Nepal.[13,21,28] Major challenges to programme coverage of interventions reviewed in this study are that child marriage is as high as 28 per cent in South Asia and three in four child brides give birth while they are still adolescents.[67]

   While some countries have programmes delivering nutrition-sensitive social protection for adolescent girls, none of them have robust policies, protocols and universal programmes that provide additional nutritional support (cash or food) specifically targeting underweight adolescent girls. Such policies can provide much-needed cash and vouchers to improve access to nutritious foods and diets.[5] Worryingly, there is also no clear evidence that these programmes are consistently, systematically and successfully reaching adolescent girls who are married and parenting in their communities, particularly those in geographically remote areas.[68]

7. Robust legislation and policies and instituting programmes alone do not lead to effective coverage unless backed with the institutional architecture and specific budget lines to support implementation. Our

discussions with country stakeholders across all eight South Asian countries provided insights on the level of bottlenecks (moderate and significant) when implementing nutrition programmes and policies.

Apart from leadership and governance, all countries are facing moderate to significant constraints in ensuring adequacy of supplies, financing, data and information systems and capacity building of the workforce owing to the scale of programmes in South Asia, which is hindering effective coverage for most interventions (weekly iron and folic acid, deworming, nutrition and health education and midday meals).

Addressing these bottlenecks requires deliberate, consistent and harmonized support by all agencies working to support roll out of government programmes, particularly in innovating newer strategies to reach the underserved and unserved population groups.

Strengths and limitations

The study had several strengths in employing mixed methods, incorporating data analysis, policy and programme review and insights from decision-makers using a workshop methodology to provide and validate information, arrive at policy actions and facilitate future collaborations to maintain momentum. However, this work was limited by the lack of data for some indicators, particularly on micronutrient deficiencies and dietary behaviours. Bottleneck analysis was undertaken on a country level, limiting the application of findings subnationally. Furthermore, the unstructured nature of the open space discussions among country-level stakeholders meant conversations and prioritization for different countries took different formats. In addition, hierarchies among stakeholders may have prioritized the perspectives of some participants in the regional meeting while preventing others from speaking up.

Conclusion

The study unmasks several nutritional deprivations faced by adolescent girls in South Asia while highlighting significant data deficiencies and gaps that hinder regional estimations, particularly for micronutrient deficiencies and dietary practices. Despite a positive policy environment in most countries, programmes are constrained to deliver a package of nutrition services for adolescent girls and fail to protect the food environment in and around schools. Furthermore, pregnant, breastfeeding and parenting adolescents and those at nutritional risk require a specialized package of services tailored to various contexts, which is not available in the majority of countries.

Constraints in programme data also impede decision-making and limit the understanding of which interventions are effective on the ground. Country and regional meetings helped validate the study findings and identify prioritized actions. These actions include scaling up a complete package of interventions, addressing data deficiencies and initiating measures to strengthen legal frameworks, enforcement and monitoring of the food environment.

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Tables

Table 1: Study methodology

Step	Methodology
1	Develop a list of adolescent nutrition indicators to provide prevalence estimates on nutritional risks, inadequate dietary practices and physical activity according to the 12 nutrition interventions clustered in five domains.
2	Map nationally representative surveys that contain relevant information to estimate the listed indicators and availability of data in public domain for secondary analyses to ascertain prevalence estimates.*
3	Analyse survey data for prevalence estimates and use published survey reports where raw data are not available for secondary analyses.
4	Conduct desk review and consult country teams** for information and review support to ascertain availability of policies and programmes to deliver the interventions.
5	Develop a system bottleneck analysis tool to categorize the severity of bottlenecks related to each adolescent nutrition intervention.
6	Use the system bottleneck tool to classify the severity of bottleneck into 'mild', 'moderate' and 'significant' for each of the nutrition interventions that was included in a programme, in consultation with country teams.
7	Compile country-wise estimates for key nutrition indicators to develop regional estimates.
8	Convene a regional meeting, bringing together country teams and country decision-makers to review the regional estimates, discuss country challenges and opportunities and identify priority actions. Update the analysis to reflect the latest data and programme information. Support implementation of the priority actions.

* The aim was to analyse time trends for the indicators but this could not be done due to the lack of data over multiple time points for many countries.

** Consisted of UNICEF adolescent nutrition focal points at national level, national government focal points managing adolescent nutrition relevant programmes and national academic experts engaged in policymaking.

Table 2: Nutrition indicators, definitions, sources and data availability by country

Indicator	Definition	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	Data source
Nutritional status										
Underweight	% adolescent girls with BMI-for-age Z score <-2 SD of the WHO child growth standards median	✓	✓	✓	✓	✓	✓	✓	✓	• Afghanistan: NNS, 2013[8] • Bangladesh: DHS, 2011,[12] 2017–2018,[13] 2022;[14] NMS, 2011–2012[10] • Bhutan: NCD Risk Factor Collaboration, 2016;[17] NNS, 2015;[15] NHS, 2023[18] • India: NFHS, 2015–2016,[20] 2019–2021[21] • Maldives: DHS 2009,[22] 2016–2017[23] • Nepal: DHS, 2016,[28] 2022[29] • Pakistan: NNS, 2018[31] • Sri Lanka DHS 2016;[32] NNMS 2022[35]
Severe underweight	% adolescent girls with BMI-for-age Z score <-3 SD of the WHO child growth standards median	✓	✓	×	✓	✓	✓	✓	✓	
Overweight/ obesity	% adolescent girls with BMI-for-age Z score >+1 SD of the WHO child growth standards median	✓	✓	✓	✓	✓	✓	✓	✓	
Obesity	% adolescent girls with BMI-for-age Z score >+2 SD of the WHO child growth standards median	✓	✓	×	✓	✓	✓	✓	✓	
Short stature	% adolescent girls with height <145 cm	×	✓	×	✓	✓	✓	✓	✓	
Any anaemia	% adolescent girls with haemoglobin (Hb) concentration below 12 g/dL non-pregnant, 11 g/dL pregnant	✓	✓	✓	✓	✓	✓	✓	✓	
Mild anaemia	% adolescent girls with Hb concentration 11.0–11.9 g/dL non-pregnant, 10.0–10.9 g/dL pregnant	×	✓	✓	✓	✓	✓	✓	✓	
Moderate/ severe anaemia	% adolescent girls with Hb concentration 8.0–10.9 g/dL non-pregnant, 7.0–9.9 g/dL pregnant	×	✓	✓	✓	✓	✓	✓	✓	

Table 2 (continued)

Indicator	Definition	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	Data source
Iron deficiency	% adolescent girls with serum ferritin <15 mcg/L (or <12.0 mcg/L for Pakistan)	×	✓	✓	✓	×	✓	✓	✓	• Afghanistan: NNS, 2013[8] • Bangladesh NMS, 2011–2012[10] • Bhutan: NHS, 2023[18] • India: CNNS, 2016–2018[19] • Nepal: NNMSS, 2016[27] • Pakistan: NNS, 2018[31] • Sri Lanka: NNMS, 2017,[34] 2022[35]
Folate deficiency	% adolescent girls with serum erythrocyte folate <151 ng/mL or RBC folate <226.5 nmol/L	✓	✓	✓	✓	×	✓	×	×	
Vitamin A deficiency	% adolescent girls with serum retinol <20 mcg/dL	×	✓	✓	✓	×	✓	×	✓	
Vitamin D deficiency	% adolescent girls with serum 25(OH)D concentration <12 ng/mL (<20 ng/mL for Pakistan)	×	×	✓	✓	×	×	✓	✓	
Vitamin B12 deficiency	% adolescent girls with serum vitamin B12 <203 pg/mL	×	✓	✓	✓	×	×	×	×	
Zinc deficiency	% adolescent girls with serum zinc <66 mcg/dL (non-fasting) /70 mcg/dL (fasting) (<60 mcg/dL for Pakistan)	×	✓	×	✓	×	✓	✓	✓	
Iodine deficiency	% adolescent girls with median urinary iodine <50 mcg/L (or <100 mcg/L for Pakistan or median urinary iodine concentration (mcg/L) for Nepal and Sri Lanka)	×	✓	×	✓	×	✓	✓	✓	
Dietary practice										
Minimum dietary diversity	% adolescent girls consuming ≥5 of 10 (9 for India and Bangladesh) defined food groups	×	✓	×	✓	×	✓	✓	×	• Afghanistan: GSHS, 2014[9] • Bangladesh: NMS, 2011–2012;[10] GSHS, 2014[11]

Table 2 (continued)

Indicator	Definition	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	Data source
Iron-rich food	% adolescent girls consuming ≥1 items of meat (beef, pork, lamb, chicken, etc.), organ meat (liver, heart or other organs), egg and fish or shellfish in a typical week	×	✓	×	✓	×	✓	✓	×	• Bhutan GSHS, 2016[16] • India: CNNS, 2016–2018[19] • Maldives, GSHS, 2009,[24] 2014[25] • Nepal: DHS, 2016,[28] 2022;[29] GSHS, 2015[26] • Pakistan: NNS, 2018;[31] GSHS, 2009[30] • Sri Lanka: GSHS, 2016[33]
Unhealthy food	% adolescent girls consuming fried foods, aerated drinks, sweets	✓	✓	×	✓	×	✓	✓	✓	
Fruits	% adolescent girls consuming fruits ≥2 times per day during the past 30 days (India: Consume fruit ≥1 times on a typical day in the past seven days)	✓	✓	✓	✓	✓	✓	✓	✓	
Vegetables	% adolescent girls consuming vegetables ≥3 times per day during the past 30 days (India: Consume vegetables ≥1 times on a typical day in the past seven days)	✓	✓	✓	✓	✓	✓	✓	✓	
Sweetened drinks	% adolescent girls consuming carbonated soft drinks ≥1 times per day during the past 30 days or sweetened drinks ≥1 times on a typical day	✓	✓	✓	✓	✓	✓	✓	✓	
Animal protein	% adolescent girls consuming animal protein (meat, poultry, fish, eggs and dairy) ≥2 times per week during the past 30 days (Pakistan: Consume at least one form of animal protein in the last 24 hours)	×	✓	×	✓	×	✓	✓	×	

Table 2 (continued)

Indicator	Definition	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	Data source
Physical activity										
Physically active daily	% students who were physically active at least 60 minutes per day every day in the seven days before the survey	✓	✓	✓	✓	✓	✓	✓	✓	• Afghanistan: GSHS, 2014[9] • Bangladesh: GSHS, 2014[11] • Bhutan: GSHS, 2016[16] • India: CNNS, 2016–2018[19] • Maldives: GSHS 2009[24] • Nepal: GSHS, 2015[26] • Pakistan: GSHS, 2009[30] • Sri Lanka: GSHS, 2016[33]
Sitting for three or more hours daily	% students who spent ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day) (India: Average hours per day spent sitting)	✓	✓	✓	✓	×	✓	✓	✓	
Physical education classes three or more times weekly	% students who attended physical education classes on 3 or more days (each week during this school year)	✓	✓	✓	×	✓	✓	✓	✓	

✓= data on indicator available; × = data on indicator not available

Source: Citation numbers given in this table refer to the full citations in the 'Literature Cited' section of this report.

Note: The age group for which the variable is available may not cover the full adolescent age range of 10–19 years.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; CNNS: Comprehensive National Nutrition Survey; DHS: Demographic and Health Survey; g/dL: gram per decilitre; GSHS: Global School-based Student Health Survey; Hb: haemoglobin; IFA: iron and folic acid; mcg/dL: microgram per decilitre; mcg/L: microgram per litre; NCD: non-communicable disease; NFHS: National Family Health Survey; ng/mL: nanogram per millilitre; NMS: National Micronutrient Survey; nmol/L: nanomole per litre; NNMS: National Nutrition and Micronutrient Survey; NNMSS: Nepal National Micronutrient Status Survey; NNS: National Nutrition Survey; pg/mL: picogram per millilitre; RBC: red blood cell; SD: standard deviation; 25(OH)D: the major circulating form of vitamin D and is a summation of both vitamin D intake and vitamin D that is produced from sun exposure; WHO: World Health Organization.

Table 3: Interventions across five domains in the study review

S. no.	Domain	Intervention	
1.	Access to nutritious foods, in schools and beyond	1.	School meals
2.	Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation
		3.	Preventive deworming (context-specific)
3.	Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond
		4b.	Nutrition chapters in school education curriculum
		5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/ day) in schools and beyond
		6.	Screen time (<120 minutes/day)
4.	Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods
		8.	Unhealthy food and beverage taxes
		9.	Nutrition front-of-pack labelling
		10.	Ban on marketing and sale of junk food in and around school premises
5.	Nutritional status assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)
		11b.	Nutrition assessment using body mass index (BMI)-for-age Z score growth charts
		12.	Nutrition-sensitive social protection (cash/vouchers/food ration/ food supplements)

Table 4: Nutrition interventions for adolescent girls included in policies and programmes in South Asia

Yes, policy; Yes, universal programme	
Yes, policy and programme in some geographies, not universally	
Yes, policy; No programme	
No policy; No programme	
NA: Not applicable as intervention is not relevant to context	NA

Domain	Intervention	Nutrition intervention included in policy and programme								Number of countries with policy	Number of countries with universal programme
		Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka		
Access to nutritious foods, in schools and beyond	1. School meals	(i)	(ii)							8	5
Micronutrient supplementation and deworming prophylaxis	2. Weekly iron and folic acid (WIFA) supplementation									7	5
	3. Preventive deworming (context-specific)	(i)				NA[iv]			NA[vi]	6	5
Nutrition and lifestyle education	4a. Nutrition and health education in schools and beyond									8	6
	4b. Nutrition chapters in school education curriculum									8	6
	5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond		(iii)							8	6
	6. Screen time (<120 minutes/day)									3	0
Healthy food environments, in and around schools	7. Restrictions on television advertising for unhealthy foods									5	1
	8. Unhealthy food and beverage taxes					(v)			(vii)	7	1
	9. Nutrition front-of-pack labelling								(viii)	3	1
	10. Ban on marketing and sale of junk food in and around school premises								(ix)	4	2

Table 4 (continued)

Domain	Intervention	Nutrition intervention included in policy and programme								Number of countries with policy	Number of countries with universal programme
		Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka		
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a. Nutrition assessment (height, weight, haemoglobin)									8	6
	11b. Nutrition assessment using BMI-for-age Z score growth charts									1	0
	12. Nutrition-sensitive social protection (cash/vouchers/food ration/ food supplements)									5	3

(i) The programme is available in some geographies for students who are attending school up to Grade 6.

(ii) The school meal programme is available for students up to Grade 5 in selected geographies.

(iii) Physical activity is in the curriculum for Grades 6–10.

(iv) Not applicable for universal annual/biannual deworming owing to low worm load prevalence; held voluntarily as per WHO guidelines.

(v) Only imported (not domestic) soft drinks are subject to tax.

(vi) Not applicable for universal annual/biannual deworming owing to low worm load prevalence.

(vii) Sugar-sweetened beverage tax; tax rate reduced since implementation.

(viii) Mandated traffic light labels.

(ix) Ban on marketing and sale within school premises exists, but does not cover the area around schools.

Table 5: Nutrition intervention data on adolescent girls collected in national information systems* in South Asia

Yes, survey; Yes, programme MIS	
Yes, survey; Yes, programme MIS in selected geographies	
Yes, survey; No programme MIS	
No survey; Yes, programme MIS	
No survey; Yes, programme MIS in selected geographies	
Not in surveys; not in programme MIS	
NA: Not applicable as intervention is not relevant to context	NA

Domain	Intervention	Data available in national surveys and programme monitoring								Number of countries with data in surveys	Number of countries with data in programme MIS
		Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka		
Access to nutritious foods, in schools and beyond	1. School meals	(i)	(ii)		(iii)					2	6
Micronutrient supplementation and deworming prophylaxis	2. Weekly iron and folic acid (WIFA) supplementation				(iii)					3	7
	3. Preventive deworming (context-specific)				(iii)	NA			NA	2	5
Nutrition and lifestyle education	4a. Nutrition and health education in schools and beyond[iv]									1	2
	5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond				(iii)					8	0
	6. Screen time (<120 minutes/day)				(iii)					1	0
Healthy food environments, in and around schools	7. Restrictions on television advertising for unhealthy foods									0	0
	8. Unhealthy food and beverage taxes									0	0
	9. Nutrition front-of-pack labelling									0	0
	10. Ban on marketing and sale of junk food in and around school premises									0	1

Table 5 (continued)

Domain	Intervention	Data available in national surveys and programme monitoring								Number of countries with data in surveys	Number of countries with data in programme MIS
		Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka		
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a. Nutrition assessment (height, weight, haemoglobin)									8	3
	11b. Nutrition assessment using BMI-for-age Z score growth charts									3	1
	12. Nutrition-sensitive social protection (cash/vouchers/food ration/ food supplements)									2	3

* National information systems = surveys and programme monitoring information systems (MIS).

(i) The school meal programme is available for students up to Grade 6 in some geographies and is provided by the World Food Programme.

(ii) Meals provided only to children aged 4–11 years.

(iii) Only once in the Comprehensive National Nutrition Survey, 2016–2018.

(iv) Intervention 4b, 'Nutrition chapters in school education curriculum', was not included in the table as its implementation is not readily captured in national surveys or programme monitoring systems.

Table 6: Number of countries facing moderate or significant system bottlenecks that impede delivery of nutrition interventions for adolescent girls in South Asia

No policy and/or no programme or only mild bottleneck

Domain	Intervention		Number of countries facing moderate or significant system bottleneck						Number of countries with universal programme
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and financing	Data and information systems	Workforce	
Access to nutritious foods, in schools and beyond	1.	School meals	1	4	4	4	4	4	5
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation			2	3	1	2	5
	3.	Preventive deworming (context-specific)	1	1	2	1	1	2	5*
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond	1	2	3	4	5	5	6
	4b.	Nutrition chapters in school education curriculum	2	4	5	5	6	5	6
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day)		1	3	4	6	4	6
	6.	Screen time (<120 minutes/day)							0
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods	1	1	1	1	1	1	1
	8.	Unhealthy food and beverage taxes	1	2	2	2	2	2	1
	9.	Nutrition front-of-pack labelling	1	1	1	1	1	1	1
	10.	Ban on marketing and sale of junk food in and around school premises		3	2	2	3	3	2
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)	2	3	3	3	3	4	6
	11b.	Nutrition assessment using BMI-for-age Z score growth charts			1	1	1	1	0
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)	1	1	3	3	4	4	3

*Deworming no longer needed in Maldives and Sri Lanka.

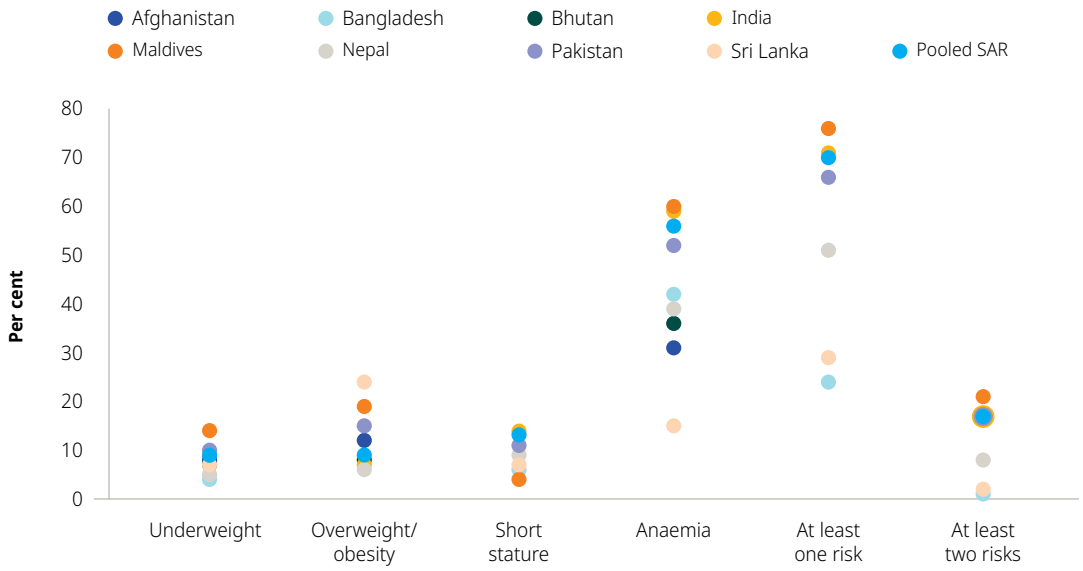
Table 7: Priority actions identified by country stakeholders at the regional conference on 'Nourishing South Asia: Scaling-up Equitable Nutritional Care for Girls and Women in South Asia' held on 18–20 September 2023

Country	Priority action	Intervention domain				
		Access to nutritious foods, in schools and beyond	Micronutrient supplementation and deworming prophylaxis	Nutrition and lifestyle education	Healthy food environments, in and around schools	Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk
Afghanistan	Increase compliance and demand for iron and folic acid supplementation through social behaviour change messaging		✓			
Bangladesh	Universalize nutrition service coverage through school platforms and community hubs and address data gaps		✓	✓	✓	✓
Bhutan	Develop a comprehensive nutrition package delivered through the education system with strengthened policy, service delivery, data and monitoring			✓		
India	Review and strengthen a multisystem approach to provide information and services to adolescent girls			✓	✓	
Maldives	Introduce multiple micronutrient supplementation across multiple platforms including schools, primary health care facilities (linked to preconception care) and youth groups		✓			
Nepal	Develop joint action plan to enhance nutrition curriculum and improve the capacity of teachers and schools for delivery			✓		
Pakistan	Keep girls in school and ensure access to a minimum package of health and nutrition services			✓		
Sri Lanka	Use adolescent-initiated interventions to encourage the adoption of affordable, high quality, attractive and healthy food habits				✓	
Number of countries identifying this intervention domain as priority		**0**	**3**	**5**	**3**	**1**

Note: These priority actions are further discussed and contextualized in the Nourishing South Asia regional conference report: United Nations Children's Fund (UNICEF), *Regional Conference on Nourishing South Asia: Scaling-up Equitable Nutritional Care for Girls and Women in South Asia, 18–20 September 2023, Kathmandu, Nepal – Summary of conference deliberations,* UNICEF Regional Office for South Asia, Kathmandu, 2024.

Figures

Figure 1: Nutritional status of adolescent girls in South Asia by country and region



Source and sample:

Afghanistan: National Nutrition Survey Report, 2013, unmarried girls aged 10–19 years: Anthropometry: n=5,805; anaemia: n=726.

Bangladesh: Demographic and Health Survey, 2022, girls aged 15–19 years: Underweight/overweight/obesity: n=662; short stature: n=816; DHS, 2011, married girls aged 15–19 years: Anaemia: n=637.

Bhutan: NCD Risk Factor Collaboration, 2016, girls aged 10–19 years: Anthropometry: n=missing. National Nutrition Survey, 2015, girls aged 10–19 years: Anaemia: n=1,509.

India: National Family Health Survey, 2019–2021, girls aged 15–19 years: Underweight/overweight/obesity: n=113,514; short stature: n=117,033; anaemia: n=115,716.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: Underweight/overweight/obesity: n=930; short stature: n=941; anaemia: n=894.

Nepal: Demographic and Health Survey, 2022, girls aged 15–19 years: Underweight/overweight/obesity: n=1,314; short stature: n=1,314; anaemia: n=1,385.

Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years: Anthropometry: n=38,994; anaemia: n=14,309.

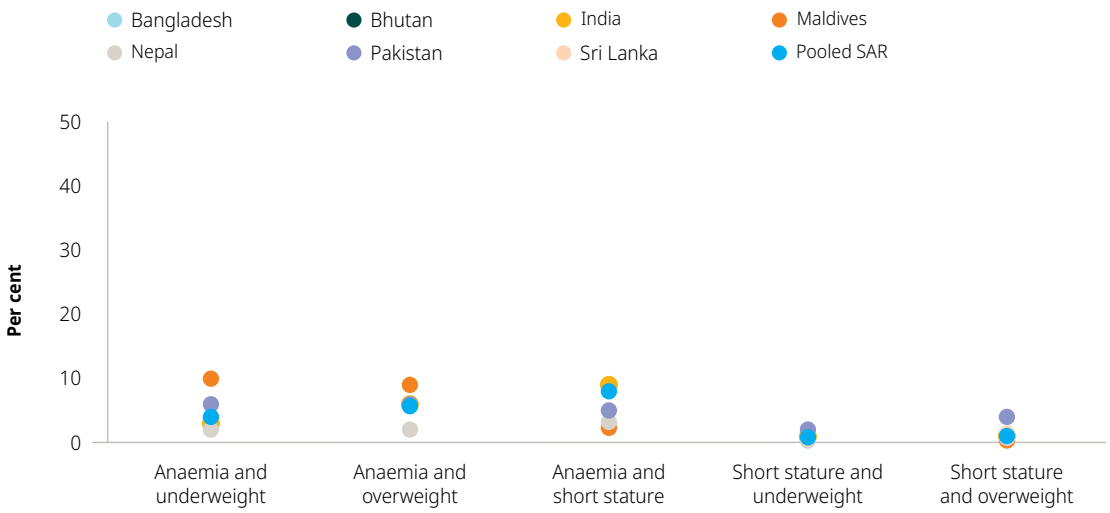
Sri Lanka: Demographic and Health Survey, 2016, girls aged 15–19 years: Anthropometry: Underweight/overweight/obesity: n=181; short stature: n=219. National Nutrition and Micronutrient Survey, 2022, girls aged 10–17 years: Anaemia: n=475.

Note: 'At least one risk' and 'At least two risks' do not include anaemia for Bangladesh and Sri Lanka.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; short stature=height <145 cm; anaemia=Hb: <11 g/dL for pregnant and <12 g/dL for non-pregnant.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; DHS: Demographic and Health Survey; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; NCD: non-communicable disease; SAR: South Asia Region; SD: standard deviation; WHO: World Health Organization.

Figure 2: Types of nutritional risk in adolescent girls in South Asia by country and region



Source and sample:

Bangladesh: Demographic and Health Survey, 2011 and 2022, girls aged 15–19 years: Underweight/overweight/obesity: n=662; short stature: n=816.

Bhutan: NCD Risk Factor Collaboration, 2016, girls aged 10–19 years: Anthropometry: n=missing. National Nutrition Survey, 2015, girls aged 10–19 years: Anaemia: n=1,509.

India: National Family Health Survey, 2019–2021, girls aged 15–19 years: Underweight/overweight/obesity: n=113,514; short stature: n=117,033; anaemia: n=115,716.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: Underweight/overweight/obesity: n=929; short stature: n=942; anaemia: n=896.

Nepal: Demographic and Health Survey, 2022, girls aged 15–19 years: Underweight/overweight/obesity: n= 1,314; short stature: n= 1,314; anaemia: n=1,385.

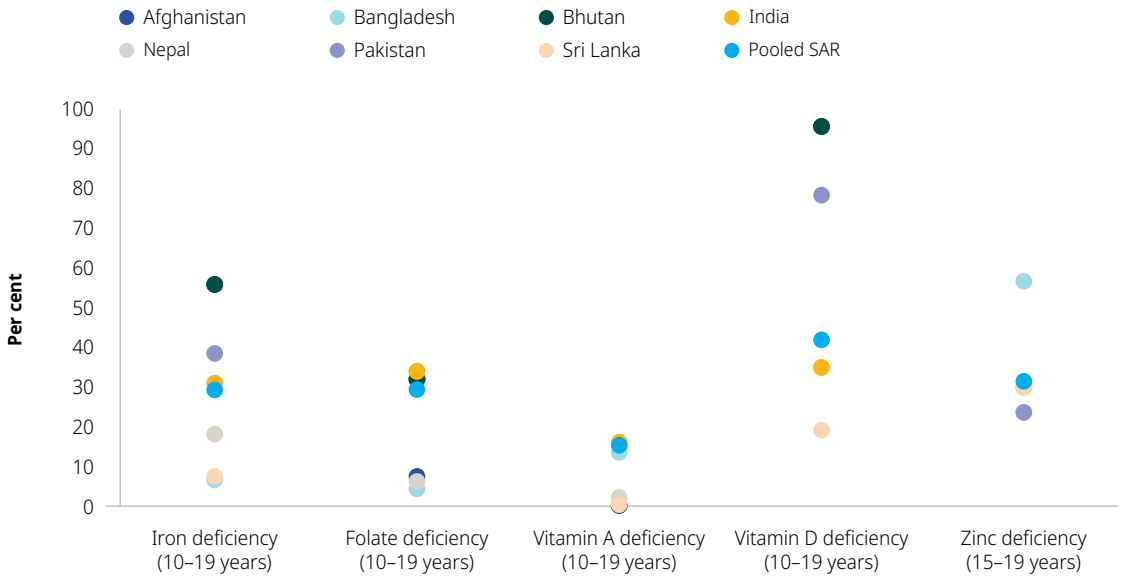
Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years: Anthropometry: n=38,994; anaemia: n=14,309.

Sri Lanka: Demographic and Health Survey, 2016, girls aged 15–19 years: Anthropometry: Underweight/overweight/obesity: n=181; short stature: n=219. National Nutrition and Micronutrient Survey, 2022, girls aged 10–17 years: Anaemia: n=475.

Definition: Anaemia=Hb: <11 g/dL for pregnant and <12 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; NCD: non-communicable disease; SAR: South Asia Region; SD: standard deviation; WHO: World Health Organization.

Figure 3: Micronutrient deficiencies in adolescent girls in South Asia by country and region



Source and sample:

Afghanistan: National Nutrition Survey Report, 2013, unmarried girls aged 10–19 years: Folate deficiency: n=741.

Bangladesh: National Micronutrient Survey, 2011–2012, girls aged 10–19 years (iron and vitamin A) and 15–19 years (folate and zinc): Iron deficiency: n=636; folate deficiency: n=164; vitamin A deficiency: n=510; zinc deficiency: n=224.

Bhutan: National Micronutrient Survey, 2015, girls aged 10–19 years: n=268.

India: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years (iron, folate, vitamin A and vitamin D) and 15–19 years (zinc), including unmarried/married (non-pregnant): Iron deficiency: n=6,269; folate deficiency: n=6,680; vitamin A deficiency: n=5,377; vitamin D deficiency: n=6,350; zinc deficiency: n=2,830.

Nepal: National Micronutrient Status Survey, 2016, non-pregnant girls aged 10–19 years (iron, folate) and 15–19 years (vitamin A and zinc): Iron deficiency: n=1,840; folate deficiency: n=1,842; vitamin A deficiency: n=232; zinc deficiency: n=234.

Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: n=974.

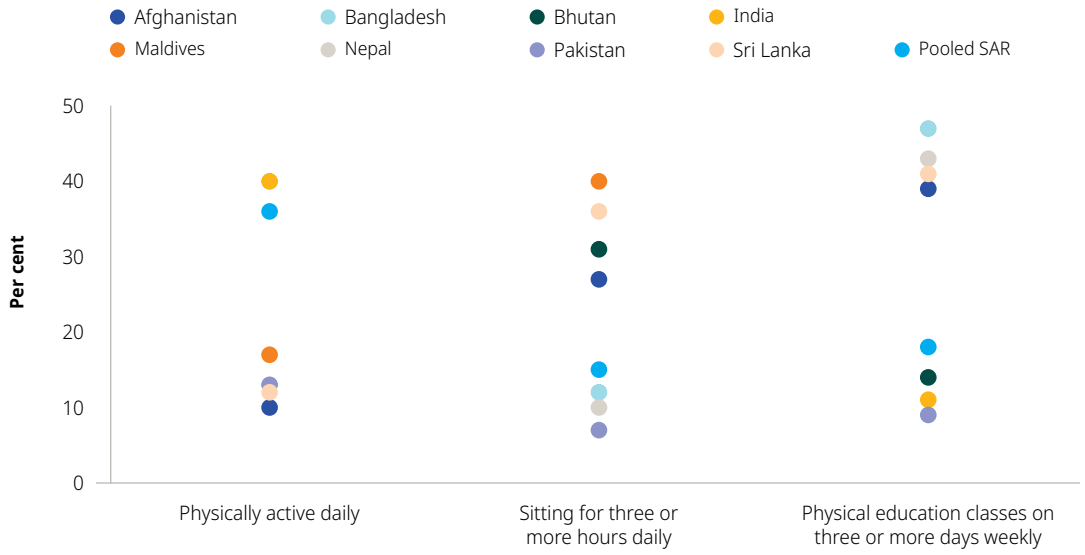
Sri Lanka: National Nutrition and Micronutrient Survey, 2017 and 2022, published reports, school-going girls aged 10–18 years (2017) and 10–17 years (2022): Iron deficiency: 2022 n= sample size missing; vitamin A deficiency: 2017 n=1,373; vitamin D deficiency: 2017 n=1,347; zinc deficiency: 2017 n=1,233.

Note: No data available for micronutrient deficiencies in Maldives. Regional and pooled estimates for vitamin B12 and iodine deficiencies are not presented as data were only available for three countries.

Definition: Iron deficiency=ferritin <15.0 mcg/L (Bhutan: ferritin <30 mcg/L); folate deficiency=RBC folate <226.5 nmol/L (India: serum folate <151 ng/mL; Bangladesh: serum folate <6.8 nmol/L); vitamin A deficiency=serum retinol <0.7 mmol/L (India and Sri Lanka: <20 mcg/dL; Nepal: mean MDRD <0.60); vitamin D deficiency: serum 25(OH)D concentration <20 ng/mL (India and Sri Lanka: <12 ng/mL); zinc deficiency=Bangladesh: serum zinc <10.1 mmol/L, India: serum zinc <66 mcg/dL (morning non-fasting) and <70 mcg/dL (fasting), Nepal and Sri Lanka: serum zinc <66 mcg/dL (afternoon fasting) or 59 mcg/dL (morning non-fasting), Pakistan: zinc <60 mcg/dL.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; mcg/dL: microgram per decilitre; mcg/L: microgram per litre; MDRD: modified relative dose response; ng/mL: nanograms per millilitre; nmol/L: nanomole per litre; RBC: red blood cell; 25(OH)D: the major circulating form of vitamin D and is a summation of both vitamin D intake and vitamin D that is produced from sun exposure.

Figure 4: Physical activity in adolescent girls in South Asia by country and region



Source and sample:

Afghanistan: Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Physical activity: n=1,238; sitting: n=1,217; physical education: n=1,133.

Bangladesh: Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Physical activity: n=1,644; sitting: n=1,637; physical education: n=1,622.

Bhutan: Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Physical activity: n=3,238; sitting: n=3,246; physical education: n=3,220.

India: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, unmarried/married/pregnant: n=17,405.

Maldives: Global School-Based Student Health Survey, 2009, school-going girls aged 13–17 years: Physical activity: n=1,626; sitting: n=1,579.

Nepal: Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Physical activity: n=2,945; sitting: n=2,968; physical education: n=2,910.

Pakistan: Global School-Based Student Health Survey, 2009, school-going girls aged 13–17 years: Physical activity: n=1,242; sitting: n=1,260; physical education: n=1,255.

Sri Lanka: Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Physical activity: n=1,756; sitting: n=1,761; physical education: n=1,753.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number; SAR: South Asia Region.

Figure 5: Trends and disparities in the prevalence of malnutrition in adolescent girls in South Asia

Figure 5a: Subnational disparities in the prevalence of underweight in South Asia by country

Source and sample:

Bangladesh: Demographic and Health Survey, 2017–2018 and 2022, girls aged 15–19 years: 2018: n=1,552; 2022: n=662.

India: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years: 2015–2016: n=118,090; 2019–2021: n=113,514.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: n=929.

Nepal: Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years: 2016: n=1,239; 2022: n=1,314.

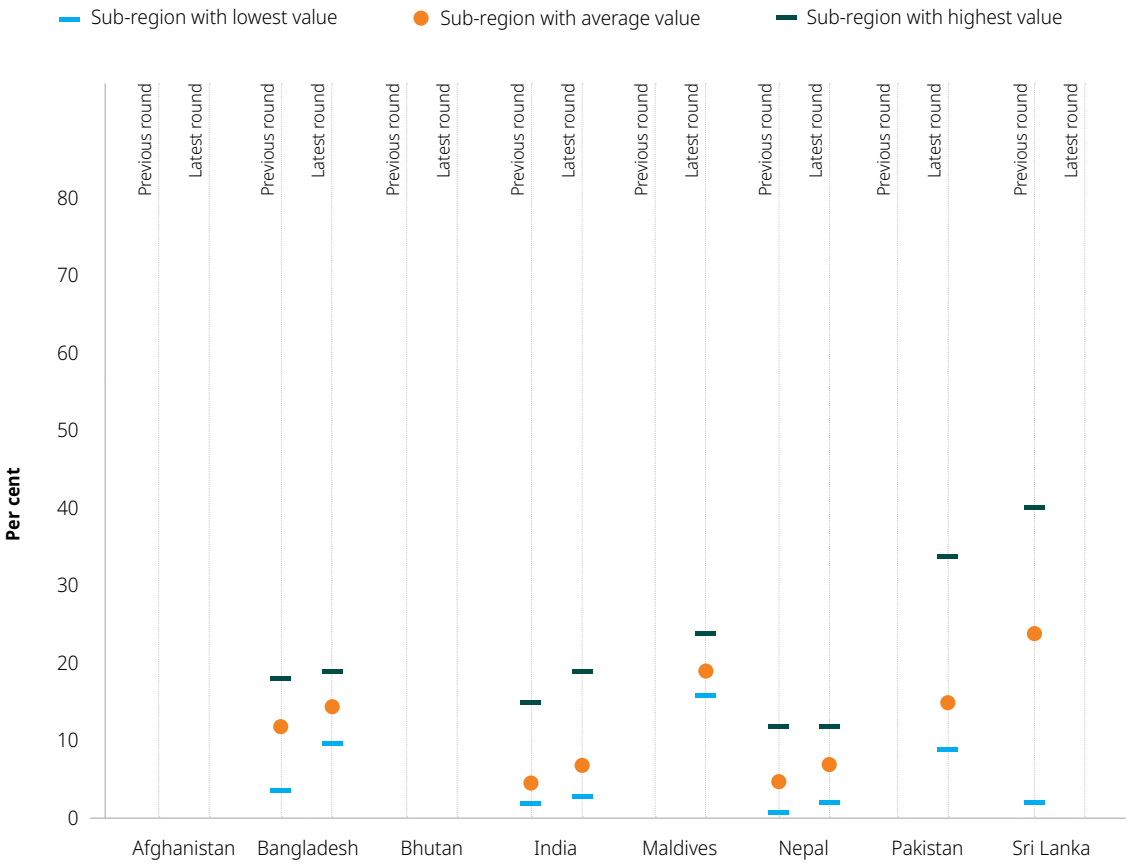
Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years: n=20,087.

Sri Lanka: Demographic and Health Survey, 2016, girls aged 15–19 years: n=181.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; n: total number; SD: standard deviation; WHO: World Health Organization.

Figure 5b: Subnational disparities in the prevalence of overweight/obesity in South Asia by country



Source and sample:

Bangladesh: Demographic and Health Survey, 2017–2018 and 2022, girls aged 15–19 years: 2017–2018: n=1,552; 2022: n=662.

India: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years: 2015–2016: n=118,090; 2019–2021: n=113,514.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: n=929.

Nepal: Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years: 2016: n=1,239; 2022: n=1,314.

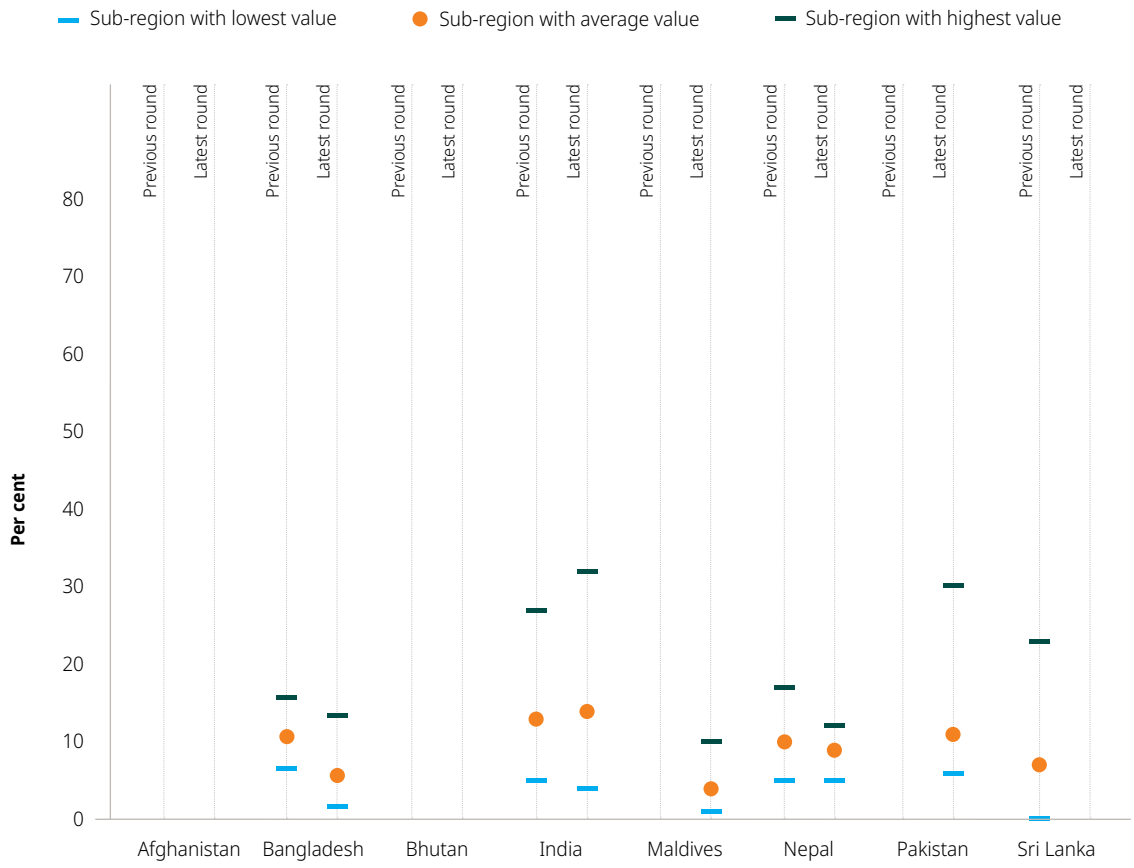
Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years: n=20,087.

Sri Lanka: Demographic and Health Survey, 2016, girls aged 15–19 years: n=181.

Definition: Overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; cm: n: total number; SD: standard deviation; WHO: World Health Organization.

Figure 5c: Subnational disparities in the prevalence of short stature in South Asia by country



Source and sample:

Bangladesh: Demographic and Health Survey, 2017–2018 and 2022, girls aged 15–19 years: 2017–2018: n=1,552; 2022: n=662.

India: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years: 2015–2016: n=122,426; 2019–2021: n=117,033.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: n=942.

Nepal: Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years: 2016: n=1,324; 2022: n=1,314.

Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years: n=19,305.

Sri Lanka: Demographic and Health Survey, 2016, girls aged 15–19 years: n=219.

Definition: Short stature=height <145 centimetre.

Acronyms: n: total number.

Figure 5d: Subnational disparities in the prevalence of anaemia in South Asia by country

Source and sample:

Bangladesh: Demographic and Health Survey, 2011, married girls aged 15–19 years: n=604.

India: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years: 2015–2016: n=121,730; 2019–2021: n=115,716.

Maldives: Demographic and Health Survey, 2016–2017, girls aged 15–19 years: n=896.

Nepal: Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years: 2016: n=1,316; 2022: n=1,385.

Pakistan: National Nutrition Survey, 2018, girls aged 15–19 years, n=7,464.

Definition: Anaemia=Hb: <11 g/dL for pregnant and <12 g/dL for non-pregnant.

Abbreviations and acronyms: g/dL: gram per decilitre; Hb: haemoglobin; n: total number.

Annexes

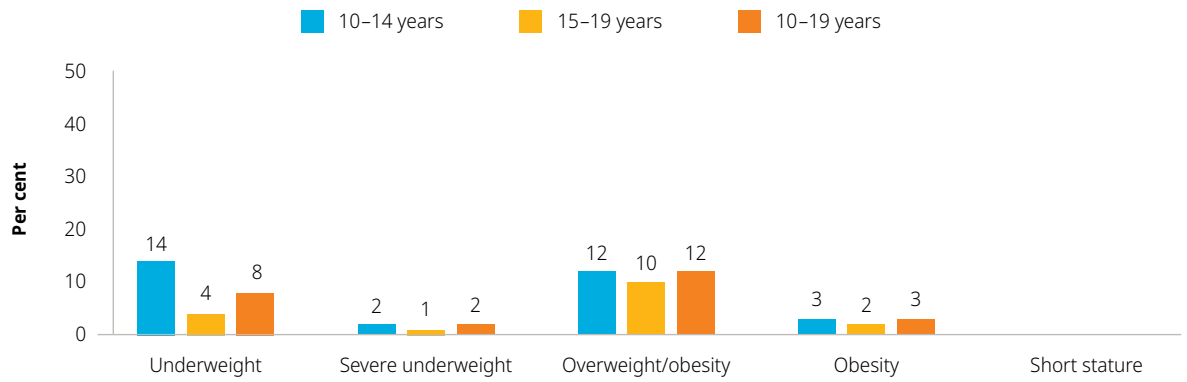
A teacher using the snake and ladder game to teach adolesents about nutrition.

Annex 1: Country profiles

Afghanistan

Nutritional status

Figure A1.1: Anthropometric status in adolescent girls aged 10–19 years in Afghanistan



Source and sample: Afghanistan National Nutrition Survey Report, 2013, unmarried girls aged 10–19 years: n=5,805.

Note: Data not available for short stature.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; n: total number; SD: standard deviation; WHO: World Health Organization.

Anaemia status

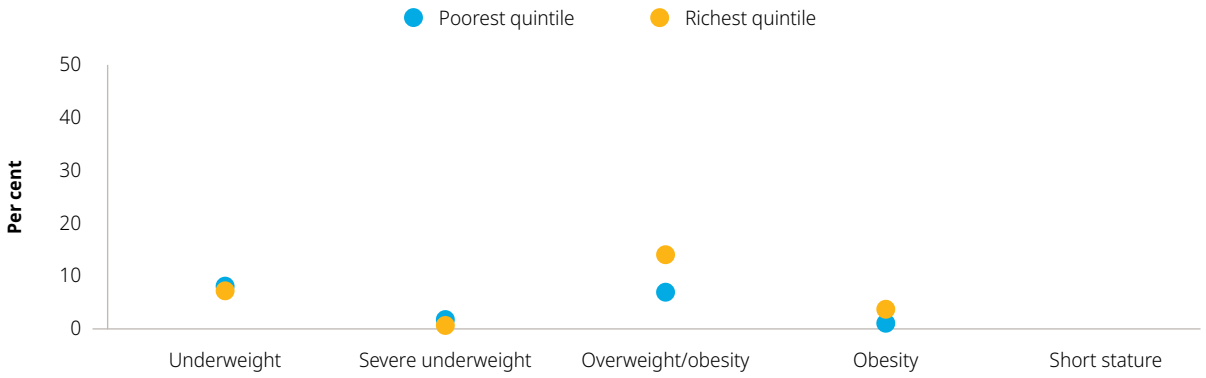
According to the Afghanistan National Nutrition Survey Report, 2013, 31 per cent of girls aged 10–19 years had any anaemia (haemoglobin <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant girls; n=726). Data not available for mild anaemia, moderate/severe anaemia, anaemia and underweight and anaemia and overweight.

Micronutrient deficiencies

According to the Afghanistan National Nutrition Survey Report, 2013, 7 per cent of unmarried adolescent girls aged 10–19 years had folate deficiency (red blood cell folate <226.5 nmol/L; n=741). Data not available for other micronutrient deficiencies.

Nutritional status by wealth quintile

Figure A1.2: Anthropometric status in adolescent girls aged 10–19 years in poorest vs richest wealth quintiles in Afghanistan



Source and sample: Afghanistan National Nutrition Survey Report, 2013, unmarried girls aged 10–19 years: Poorest: n=1,026; richest: n=1,292.

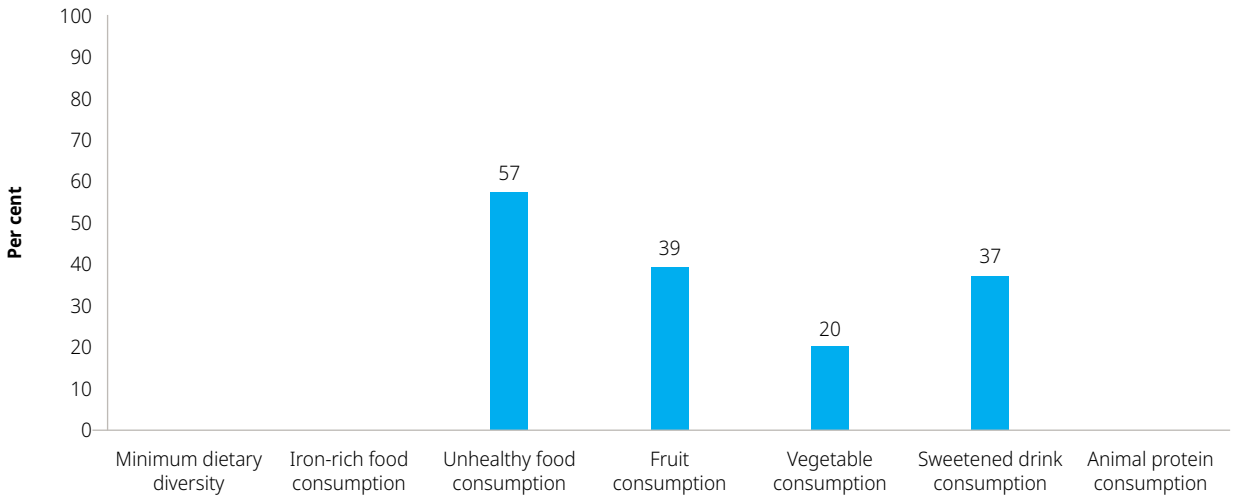
Note: Data not available for short stature. Figure displays estimates for poorest vs richest quintiles and not poorest/poor vs rich/richest quintiles used elsewhere in this report due to raw data being not publicly available.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.3: Dietary practices of adolescent girls aged 13–17 years in Afghanistan



Source and sample: Afghanistan Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Unhealthy food consumption: n=1,232; fruit/vegetable consumption: n=1,196; sweetened drink consumption: n=1,220.

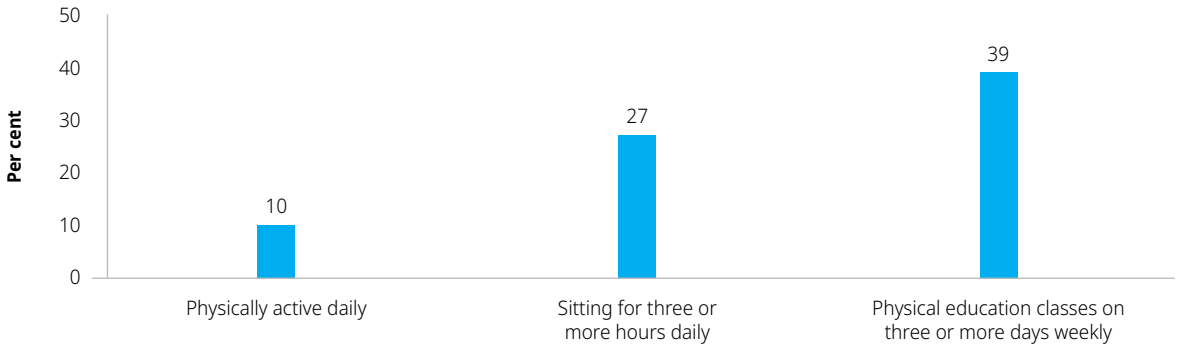
Note: Data not available for minimum dietary diversity and iron-rich food and animal protein consumption.

Definition: Unhealthy food consumption: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruit two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per day in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days.

Acronyms: n: total number.

Physical activity

Figure A1.4: Physical activity in school-going adolescent girls aged 13–17 years in Afghanistan



Source and sample: Afghanistan Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Physical activity: n=1,238; sitting: n=1,217; physical education: n=1,133.

Definition: Physically active daily: physically active at least 60 minutes per day on all 7 days during the 7 days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days each week during this school year.

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.1: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Afghanistan

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain		Intervention	Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals**						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day)						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/vouchers/food ration/ food supplements)						

* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

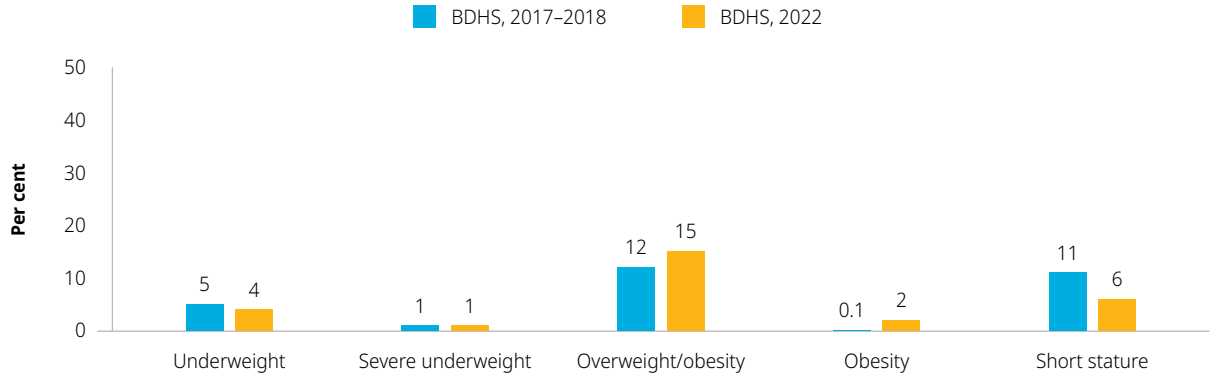
** The school meal programme is available for students up to Grade 6 (aged 13 years) in some geographies.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Bangladesh

Nutritional status

Figure A1.5: Anthropometric status in adolescent girls aged 15–19 years in Bangladesh



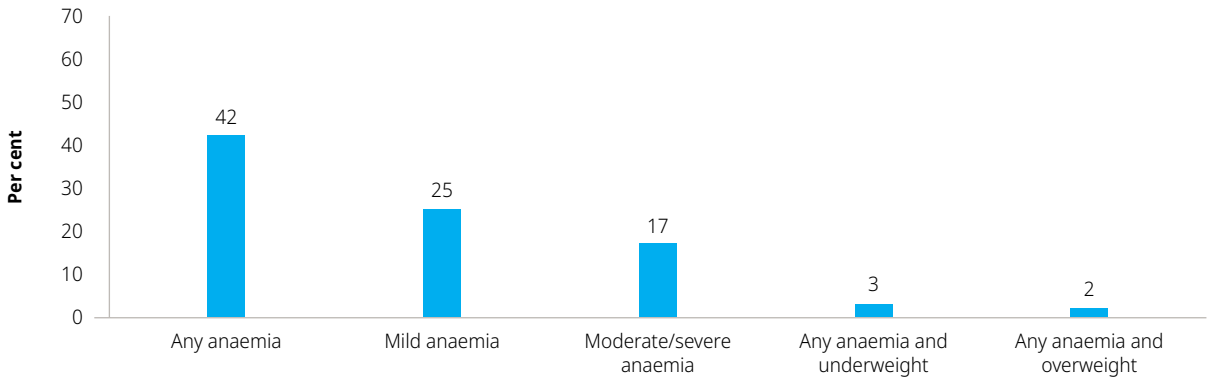
Source and sample: Bangladesh Demographic and Health Survey, 2017–2018 and 2022, girls aged 15–19 years, including married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2017–2018: n=1,552, 2022: n= 662; short stature: 2017–2018: n=1,916, 2022: n=816.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BDHS: Bangladesh Demographic and Health Survey; BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; WHO: World Health Organization.

Anaemia status

Figure A1.6: Anaemia status in adolescent girls aged 15–19 years in Bangladesh



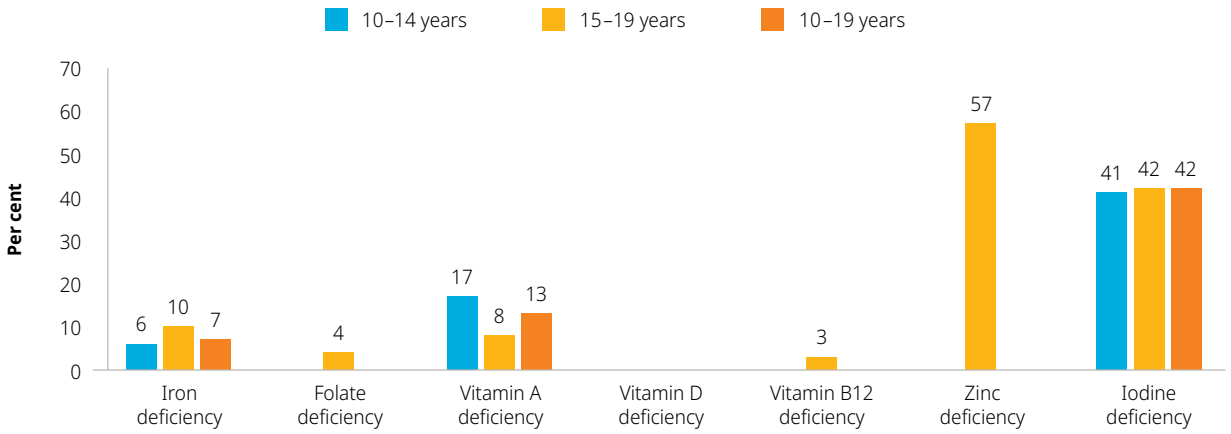
Source and sample: Bangladesh Demographic and Health Survey, 2011, married girls aged 15–19 years: Any/mild/moderate/severe anaemia: n=637; any anaemia and underweight/overweight: n=508.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; SD: standard deviation; WHO: World Health Organization.

Micronutrient deficiencies

Figure A1.7: Micronutrient deficiencies in adolescent girls aged 10–19 years in Bangladesh by type of deficiency



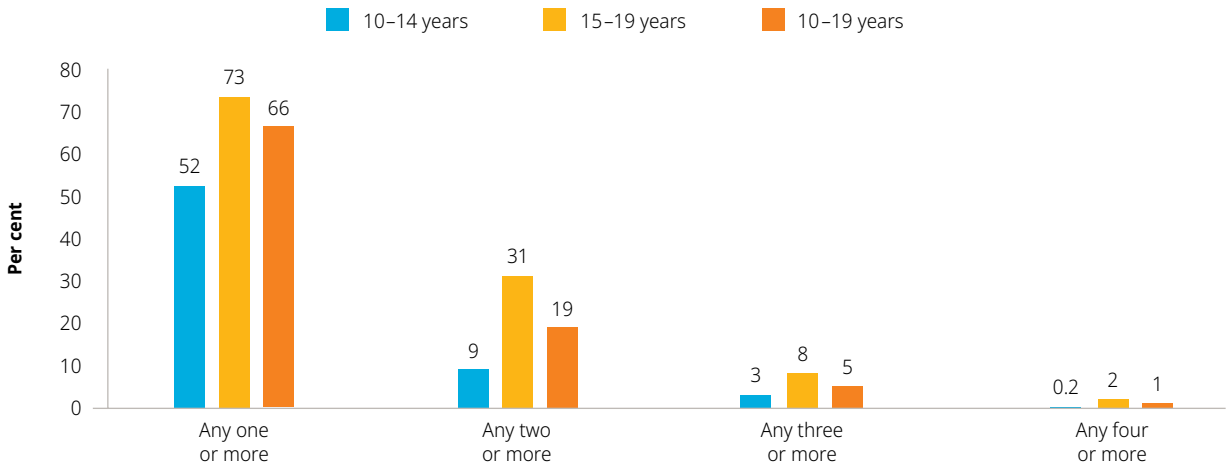
Source and sample: Bangladesh National Micronutrient Survey, 2011–2012, girls aged 10–19 years: 10–14 years: Iron deficiency: n=321, vitamin A deficiency: n=330, iodine deficiency: n=289; 15–19 years: Iron deficiency: n=171, folate deficiency: n=164, vitamin A deficiency: n=180, vitamin B12 deficiency: n=163, zinc deficiency: n=224, iodine deficiency: n=259; 10–19 years: iron deficiency: n=636, vitamin A deficiency: n=510, iodine deficiency: n=548.

Note: Raw data not available for vitamin D deficiency.

Definition: Iron deficiency=ferritin <15.0 mcg/L; folate deficiency=folate< 6.8 nmol/L; vitamin A deficiency=serum retinol <0.7 mmol/L; vitamin B12 deficiency=serum vitamin B12 <200 pg/mL; zinc deficiency=serum zinc <10.1 mmol/L; iodine deficiency=median urinary iodine <100 mcg/L.

Abbreviations and acronyms: mcg/L: microgram per litre; mmol/L: millimole per litre; n: total number; nmol/L: nanomole per litre; pg/mL: picogram per millilitre.

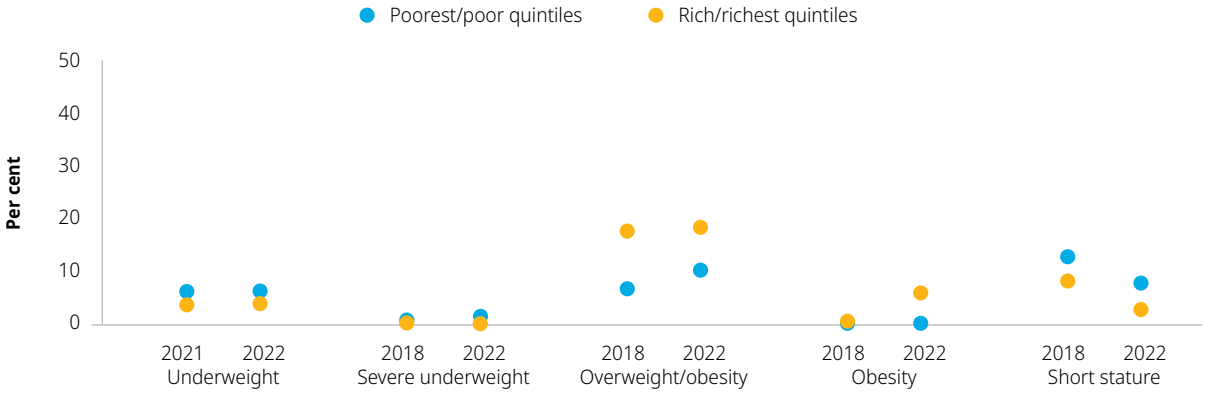
Figure A1.8: Micronutrient deficiencies in adolescent girls aged 10–19 years in Bangladesh by number of deficiencies



Source and sample: Bangladesh National Micronutrient Survey, 2011–2012, girls aged 10–19 years: 10–14 years: n=350; 15–19 years: n=286; 10–19 years: n=636.

Nutritional status by wealth quintile

Figure A1.9: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Bangladesh



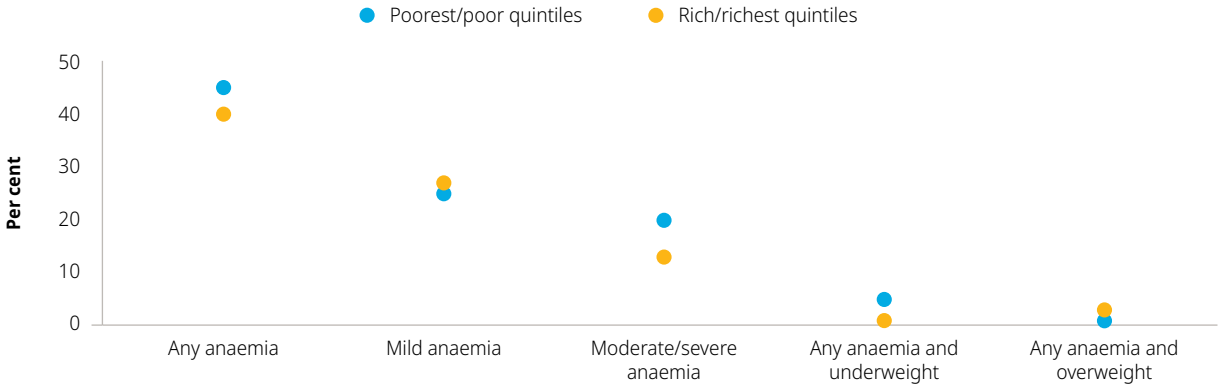
Source and sample: Bangladesh Demographic and Health Survey, 2017–2018 and 2022, girls aged 15–19 years, including married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2018: n=1,552, 2022: n=662; short stature: 2018: n=1,916, 2022: n=816.

Note: Severe underweight and obesity statistics are based on fewer than 25 cases.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Figure A1.10: Anaemia status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Bangladesh



Source and sample: Bangladesh Demographic and Health Survey, 2011, girls aged 15–19 years, including married/pregnant: Any/mild/moderate/severe anaemia: n=637; any anaemia and underweight/overweight: n=508.

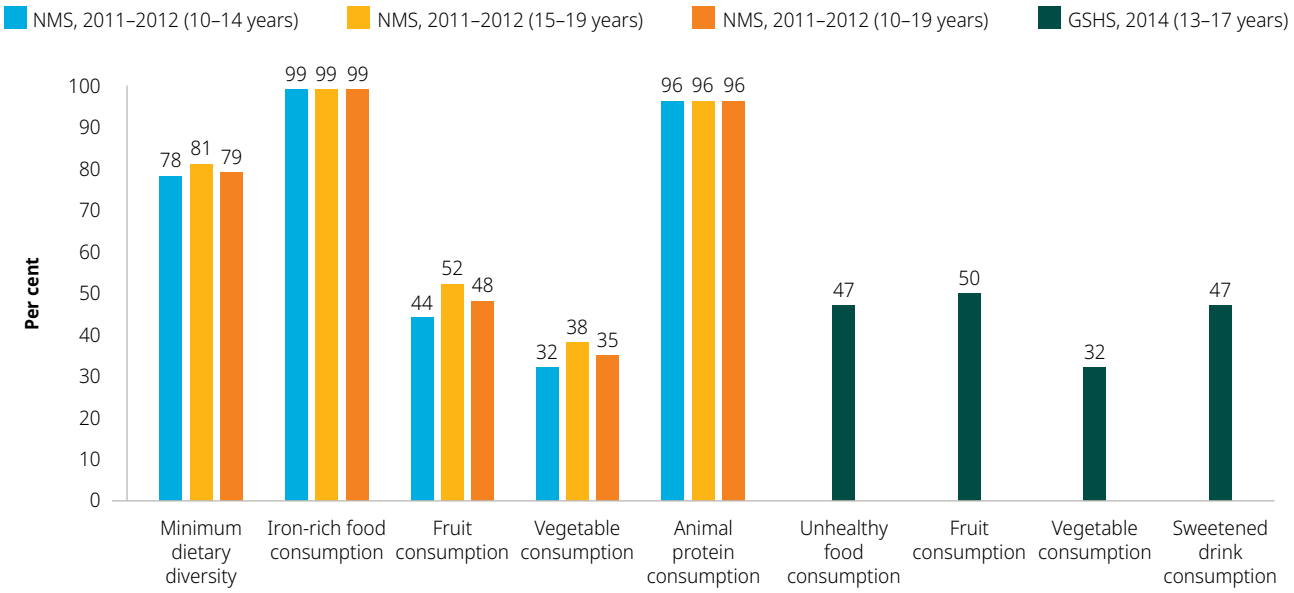
Note: Any anaemia and underweight/overweight statistics are based on fewer than 25 cases.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; cm: centimetre; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization

Dietary practices

Figure A1.11: Dietary practices of adolescent girls aged 10–19 years in Bangladesh



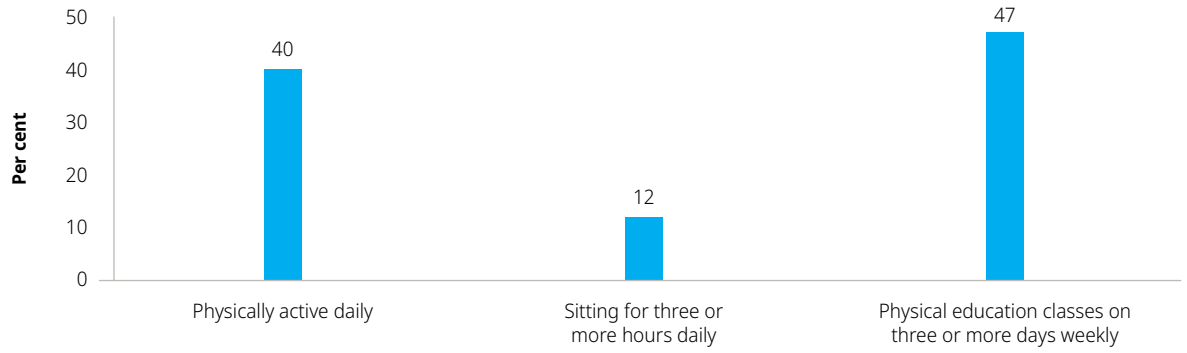
Source and sample: Bangladesh National Micronutrient Survey, 2011–2012, girls aged 10–19 years, including unmarried/married (non-pregnant): 10–14 years: n=350; 15–19 years: n=286; 10–19 years: n=636. Bangladesh Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Unhealthy food/ fruit/vegetable consumption: n=1,672; sweetened drink consumption: n=1,663.

Definition: Minimum dietary diversity: consumption from five or more of nine food groups at least once in last seven days from: (1) grains, white tubers and plantains; (2) pulses; (3) dairy; (4) meat, poultry and fish; (5) eggs; (6) dark green leafy vegetables; (7) vitamin-A-rich fruits and vegetables; (8) other fruits; and (9) other vegetables; iron-rich food consumption: consumption of one or more of meat, organ meat, egg and fish or shellfish in the last seven days; unhealthy food consumption: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruit two or more times per day (NMS: in the last seven days; GSHS: in the last 30 days); vegetable consumption: consumption of vegetables three or more times per day (NMS: in the last seven days; GSHS: in the last 30 days); sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days; animal protein consumption: consumption of animal protein two or more times in the last seven days.

Acronyms: GSHS: Global School-Based Student Health Survey; n: total number; NMS: National Micronutrient Survey.

Physical activity

Figure A1.12: Physical activity in school-going adolescent girls aged 13–17 years in Bangladesh



Source and sample: Bangladesh Global School-Based Student Health Survey, 2014, school-going girls aged 13–17 years: Physical activity: n=1,644; sitting: n=1,637; physical education: n=1,622.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.2: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Bangladesh

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain		Intervention	Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals for pre-primary (aged 4–5 years) and primary school-age children (aged 6–11 years) only**						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming to girls aged 13–19 years (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum***						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/food supplements)						

* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

** A package of 75 grams of vitamin and mineral-fortified biscuits (338 kilocalories/a day and 67 per cent of daily micronutrient requirement) as a mid-morning snack on alternate days and freshly cooked nutritious meal (providing 536 kilocalories and 50 per cent of daily micronutrient recommendation) on the other alternate days in a week, with one egg weekly with the cooked meal.

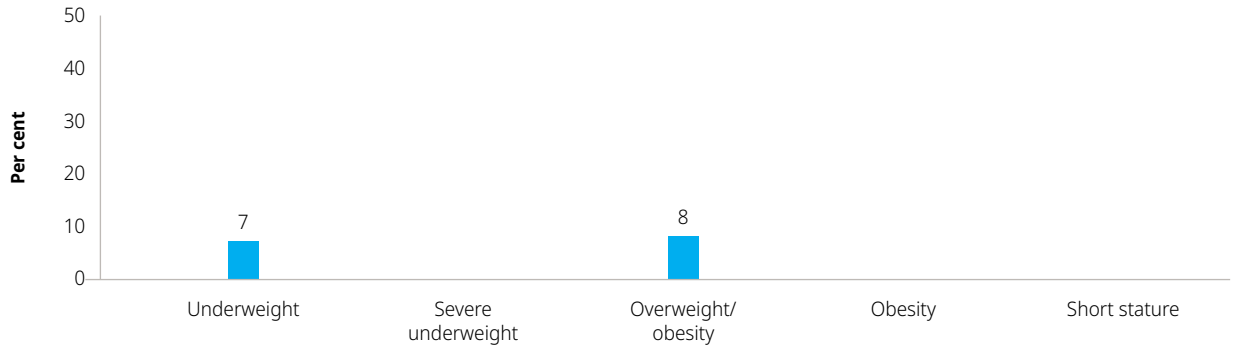
*** Only Grades 6 and 7.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Bhutan

Nutritional status

Figure A1.13: Anthropometric status in adolescent girls aged 15–19 years in Bhutan



Source and sample: NCD Risk Factor Collaboration, 2016, girls aged 15–19 years: sample size not available.

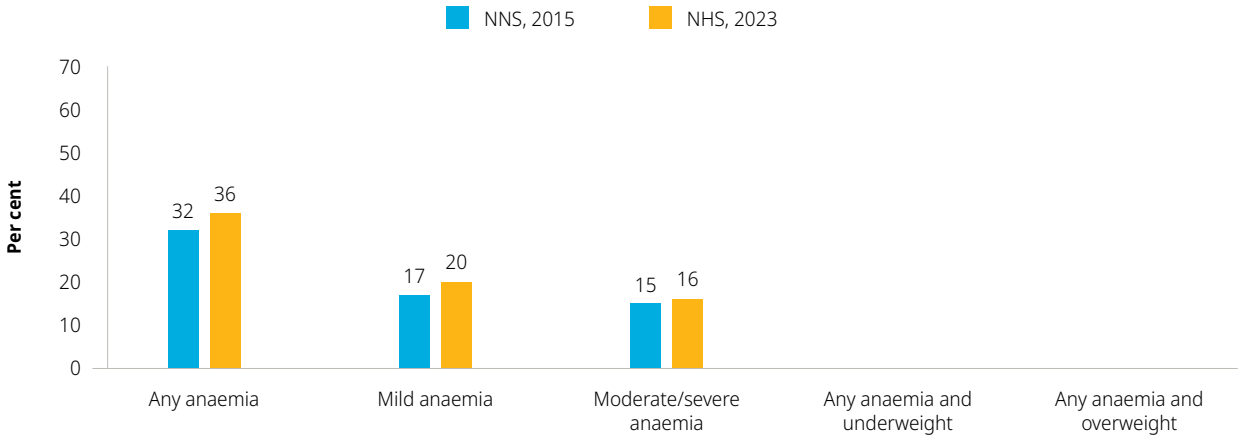
Note: The NCD Risk Factor Collaboration, 2016, estimates for Bhutan are derived using data from the Bhutan STEPS 2014 and 2019 surveys. Data not available for severe underweight, obesity and short stature.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity =BMI-for-age Z score >+1 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; n: total number; NCD: non-communicable disease; SD: standard deviation; STEPS: STEPwise approach to NCD risk factor surveillance; WHO: World Health Organization.

Anaemia status

Figure A1.14: Anaemia status of adolescent girls aged 10–19 years in Bhutan



Source and sample: Bhutan National Nutrition Survey, 2015, girls aged 10–19 years: n=1,509; Bhutan Fifth National Health Survey, 2023, report, girls aged 10–19 years: n=268.

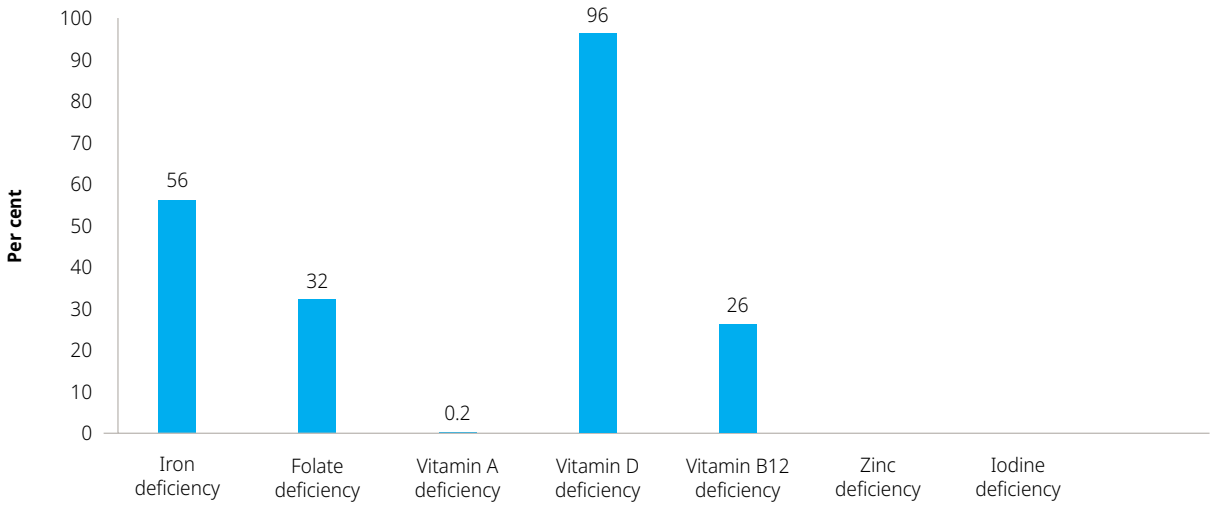
Note: Data not available for any anaemia and underweight/overweight.

Definition: Any anaemia=Hb <11 g/dL for pregnant and <12 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant.

Abbreviations and acronyms: g/dL: gram per decilitre; Hb: haemoglobin; n: total number; NHS: National Health Survey; NNS: National Nutrition Survey.

Micronutrient deficiencies

Figure A1.15: Micronutrient deficiencies in adolescent girls aged 10–19 years in Bhutan by type of deficiency



Source and sample: Bhutan Fifth National Health Survey, 2023, report, girls aged 10–19 years: n=268.

Note: The Bhutan NHS, 2023, report also provided data on other vitamin B and calcium deficiencies: B1: 2 per cent; vitamin B2: 11 per cent; calcium: 11 per cent; n=268. Data not available for zinc and iodine deficiencies.

Definition: Iron deficiency=serum ferritin <30 mcg/L; folate deficiency=folate <5 nmol/L; vitamin A deficiency=serum retinol <0.7 mmol/L; vitamin D: deficiency=serum 25(OH)D concentration <20 ng/mL; vitamin B1 deficiency=serum thiamine pyrophosphate <2.5 mcg/dL; vitamin B2 deficiency=whole blood riboflavin <10 mcg/dL; vitamin B12 deficiency=serum total cobalamin <200 pg/mL; calcium deficiency=serum calcium <8.5 mg/dL.

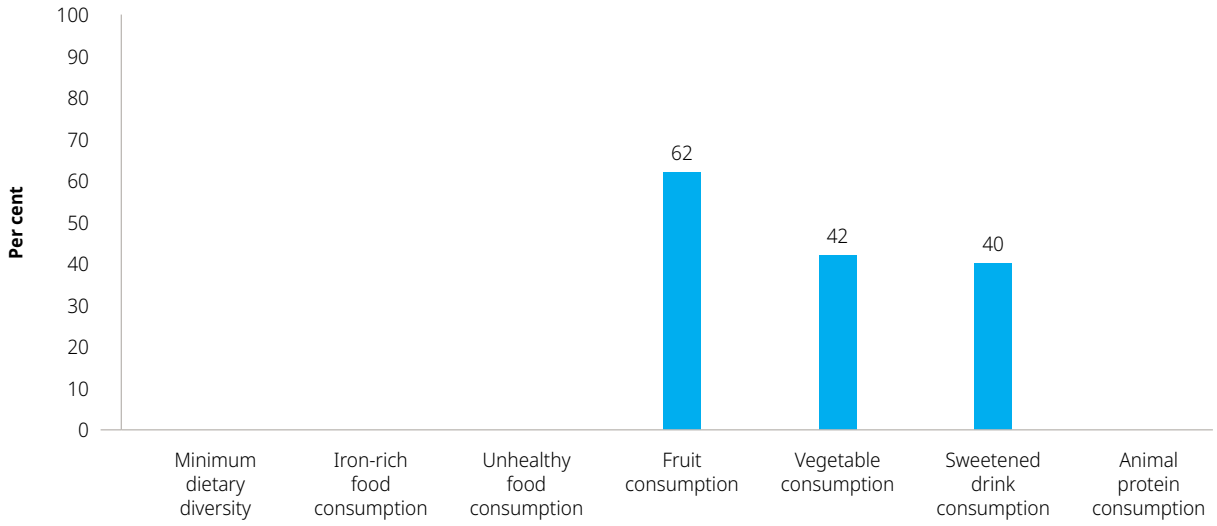
Abbreviations and acronyms: mcg/L: microgram per litre; mg/dL: milligram per decilitre; mmol/L: millimole per litre; ng/mL: nanogram per millilitre; NHS: National Health Survey; nmol/L: nanomole per litre; pg/mL: picogram per millilitre; 25(OH)D: the major circulating form of vitamin D and is a summation of both vitamin D intake and vitamin D that is produced from sun exposure.

Nutritional status by wealth quintile

Data not available.

Dietary practices

Figure A1.16: Dietary practices of adolescent girls aged 13–17 years in Bhutan



Source and sample: Bhutan Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Fruit/vegetable consumption: n=3,246; sweetened drink consumption: n=3,252.

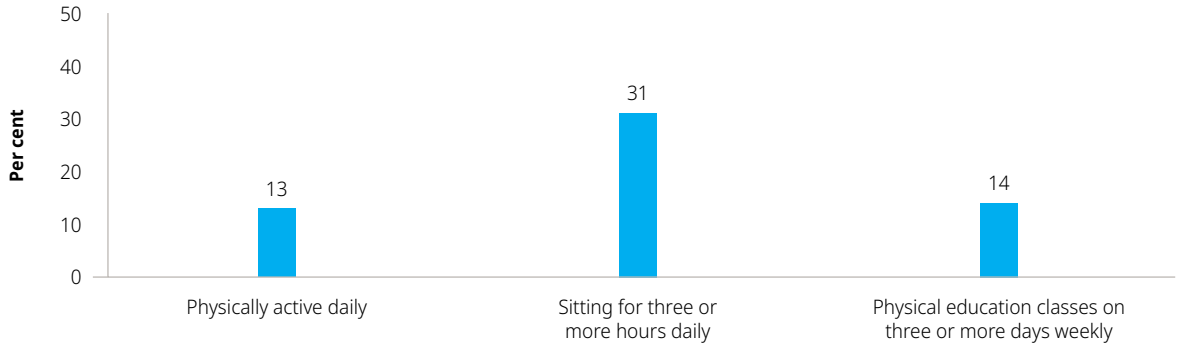
Note: Data not available for minimum dietary diversity and iron-rich food, unhealthy food and animal protein consumption.

Definition: Fruit consumption: consumption of fruit two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per day in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days.

Acronyms: n: total number.

Physical activity

Figure A1.17: Physical activity in school-going adolescent girls aged 13–17 years in Bhutan



Source and sample: Bhutan Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Physical activity: n=3,238; sitting: n=3,246; physical education: n=3,220.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.3: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Bhutan

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

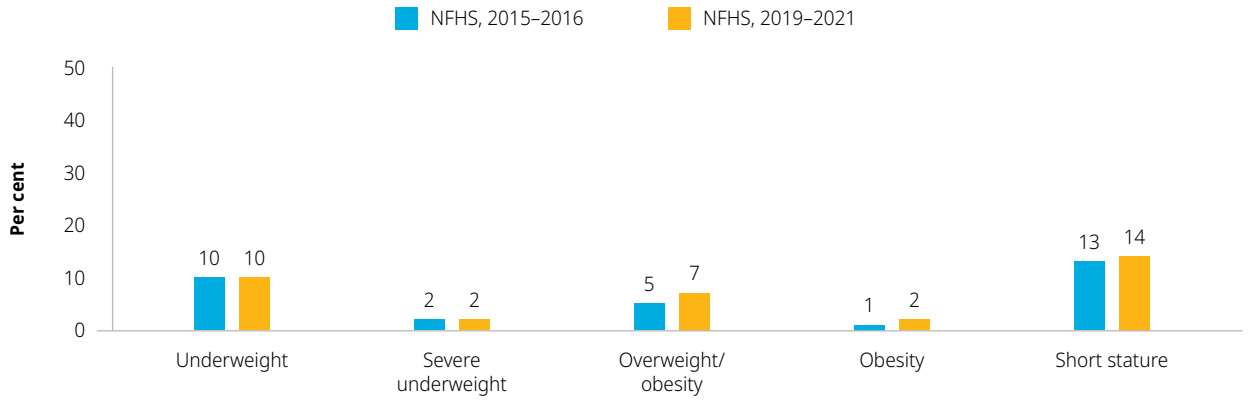
* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

India

Nutritional status

Figure A1.18: Anthropometric status in adolescent girls aged 15–19 years in India



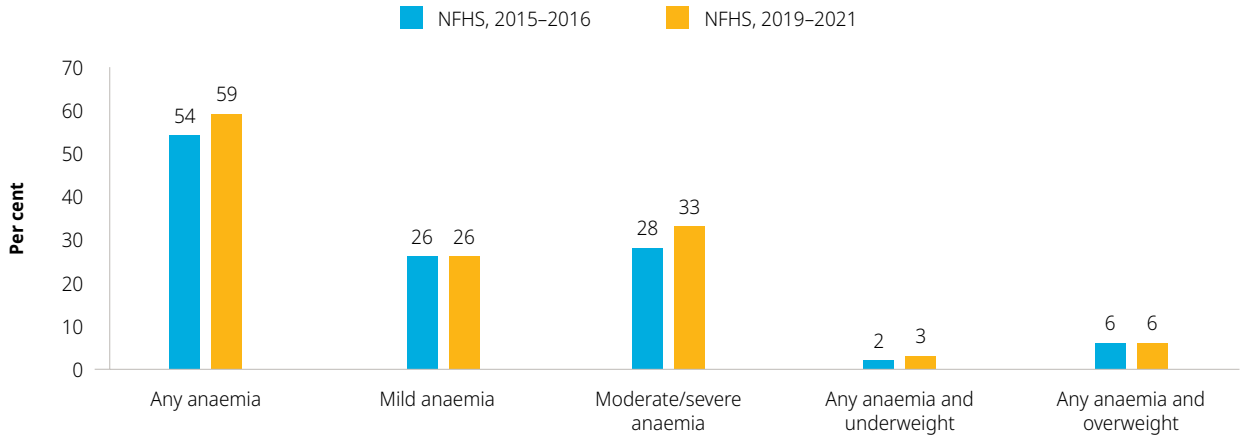
Source and sample: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2015–2016: n=118,090, 2019–2021: n=113,514; short stature: 2015–2016: n=122,426, 2019–2021: n=117,033.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; NFHS: National Family Health Survey; SD: standard deviation; WHO: World Health Organization.

Anaemia status

Figure A1.19: Anaemia status in adolescent girls aged 15–19 years in India



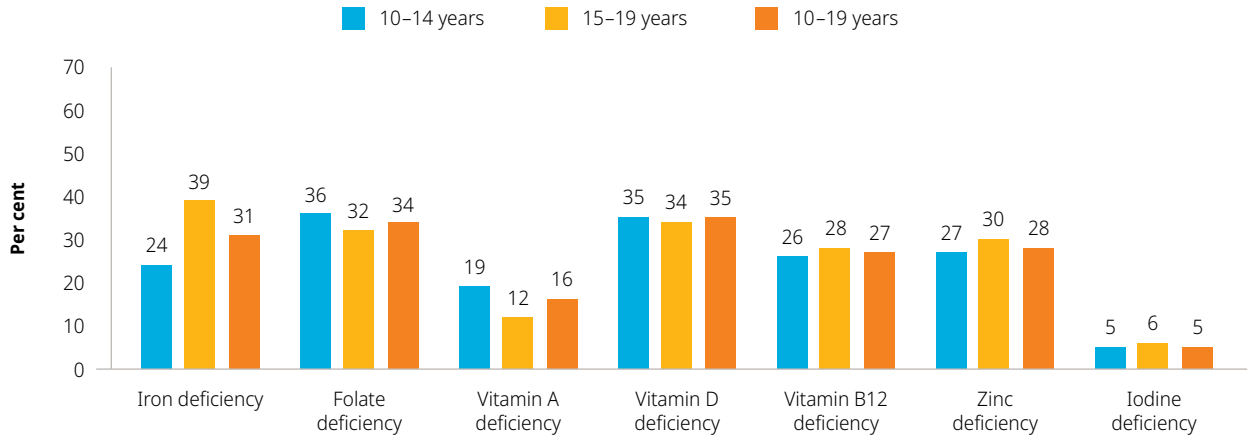
Source and sample: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years including unmarried/married/pregnant: 2016: n=121,730; 2021: n=115,716.

Definition: Any anaemia=Hb <11 g/dL for pregnant and <12 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; NFHS: National Family Health Survey; SD: standard deviation; WHO: World Health Organization.

Micronutrient deficiencies

Figure A1.20: Micronutrient deficiencies in adolescent girls aged 10–19 years in India by type of deficiency

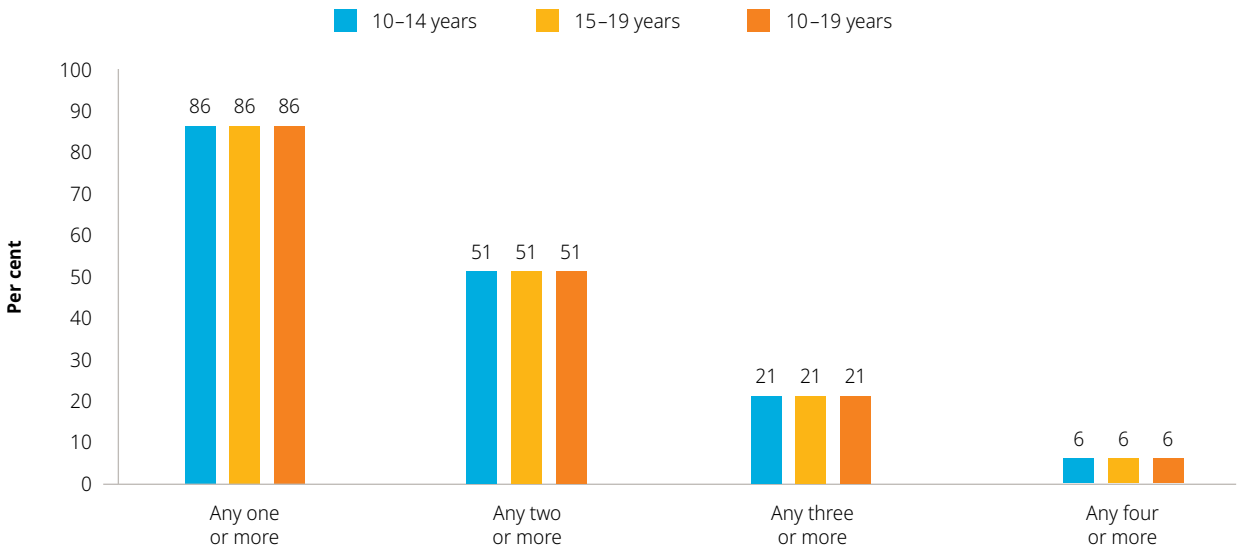


Source and sample: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, including unmarried/married (non-pregnant): Iron deficiency: 10–14 years: n=3,315, 15–19 years: n=2,957, 10–19 years: n=6,269; folate deficiency: 10–14 years: n=3,722, 15–19 years: n=3,374, 10–19 years: n=6,680; vitamin A deficiency: 10–14 years: n=2,845, 15–19 years: n=2,537, 10–19 years: n=5,377; vitamin D deficiency: 10–14 years: n=3,362, 15–19 years: n=2,991, 10–19 years: n=6,350; vitamin B12 deficiency: 10–14 years: n=3,034, 15–19 years: n=2,729, 10–19 years: n=5,769; zinc deficiency: 10–14 years: n=3,024, 15–19 years: n=2,830, 10–19 years: n=5,850; iodine deficiency: 10–14 years n=3,383, 15–19 years: n=2,986, 10–19 years: n=6,364.

Definition: Iron deficiency=ferritin <15.0 mcg/L; folate deficiency=serum folate<151 ng/mL; vitamin A deficiency=serum retinol <20 mcg/dL; vitamin D deficiency=serum vitamin D <12 ng/mL; vitamin B12 deficiency=serum vitamin B12 <203 pg/mL; zinc deficiency=serum zinc <66 mcg/dL and <70 mcg/dL for morning non-fasting and fasting, respectively; iodine deficiency=median urinary iodine <50 mcg/L.

Abbreviations and acronyms: g/dL: gram per decilitre; mcg/dL: microgram per decilitre; mcg/L: microgram per litre; n: total number; ng/mL: nanogram per millilitre; pg/mL: picogram per millilitre.

Figure A1.21: Micronutrient deficiencies in adolescent girls aged 10–19 years in India by number of deficiencies



Source and sample: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, including unmarried/married (non-pregnant): Iron deficiency: n=6,269; folate deficiency: n=6,680; vitamin A deficiency: n=5,377; vitamin B12 deficiency: n=5,769; vitamin D deficiency: n=6,350; zinc deficiency: n=5,850.

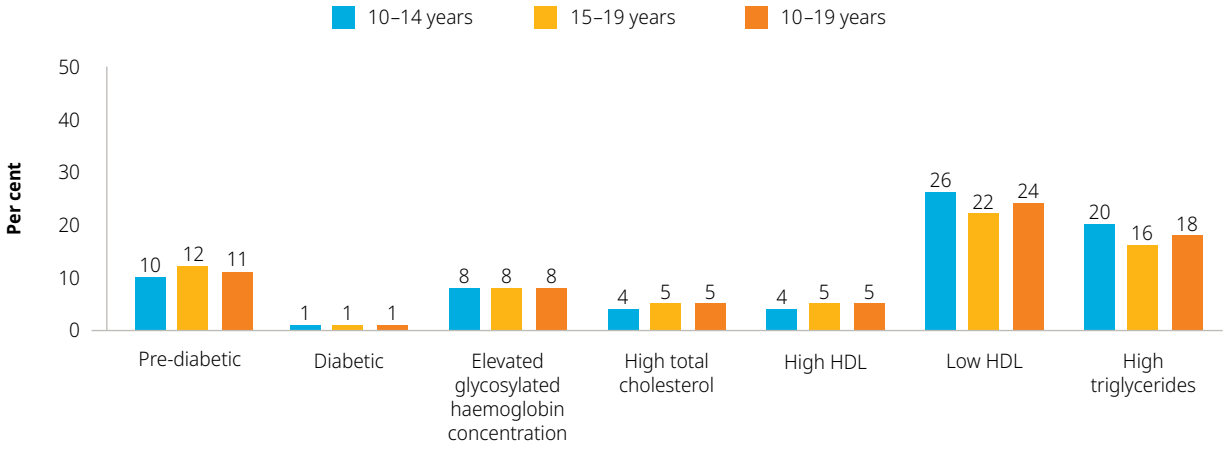
Note: Number of concurrent deficiencies includes iron, folate, vitamin A, vitamin D, vitamin B12 and zinc. Iodine deficiency is not included.

Definition: Iron deficiency=ferritin <15.0 mcg/L; folate deficiency=serum folate<151 ng/mL; vitamin A deficiency=serum retinol <20 mcg/dL; vitamin B12 deficiency=serum vitamin B12 <203 pg/mL; vitamin D deficiency=serum vitamin D <12 ng/mL; zinc deficiency=serum zinc <66 mcg/dL and <70 mcg/dL for morning non-fasting and fasting, respectively.

Abbreviations and acronyms: mcg/dL: microgram per decilitre; mcg/L: microgram per litre; n: total number; ng/mL: nanogram per millilitre; pg/mL: picogram per millilitre.

Non-communicable diseases

Figure A1.22: Risk of non-communicable diseases in adolescent girls aged 10–19 years in India



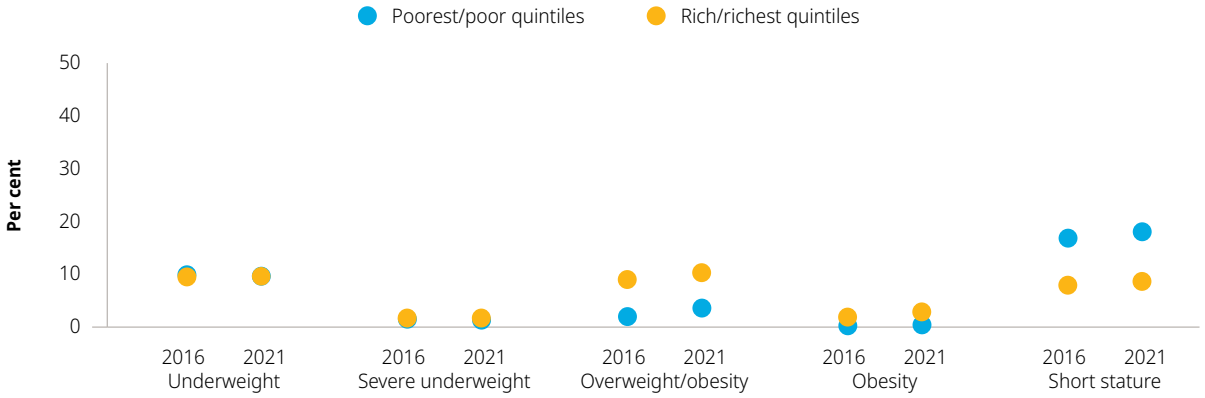
Source and sample: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, including unmarried/married/pregnant: Pre-diabetic: n=10,034; diabetic: n=10,034; elevated glycosylated haemoglobin concentration: n=13,069; high total cholesterol: n=13,006; high LDL: n=13,004; low HDL: n=12,919; high triglycerides: n=13,016.

Definition: Pre-diabetic=fasting plasma glucose >100 mg/dL and ≤126 mg/dL; diabetic=fasting plasma glucose: >126 mg/dL; elevated glycosylated haemoglobin concentration=HbA1c >5.7% and <6.4%; high total cholesterol=≥200 mg/dL; high LDL=≥130 mg/dL; low HDL=<40 mg/dL; high triglycerides=≥130 mg/dL.

Abbreviations and acronyms: HbA1c: glycated haemoglobin; HDL: high density lipoprotein: LDL: low density lipoprotein; mg/dL; milligram per decilitre; n: total number.

Nutritional status by wealth quintile

Figure A1.23: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in India

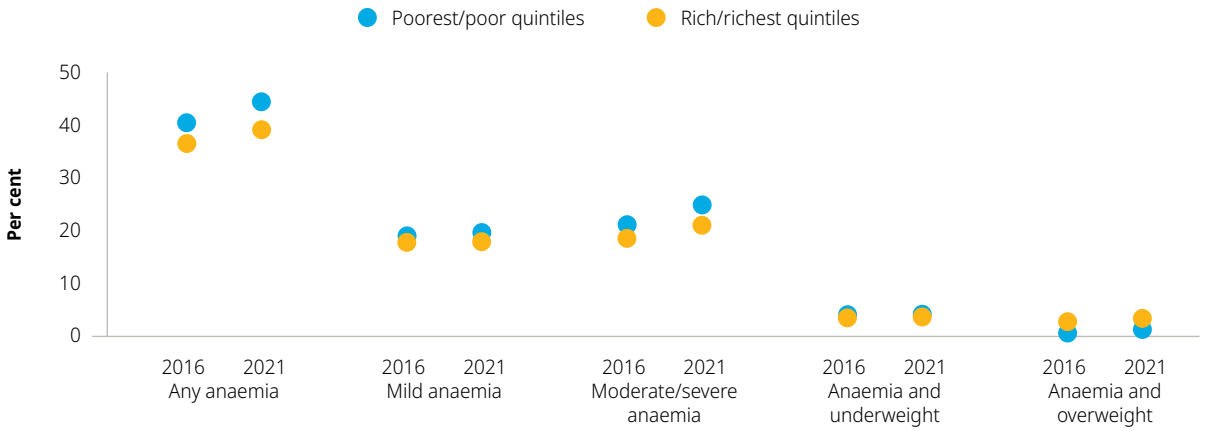


Source and sample: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years, including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2015–2016: n=118,090, 2019–2021: n=113,514; short stature: 2015–2016: n=122,426, 2019–2021: n=117,033.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Figure A1.24: Anaemia status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in India



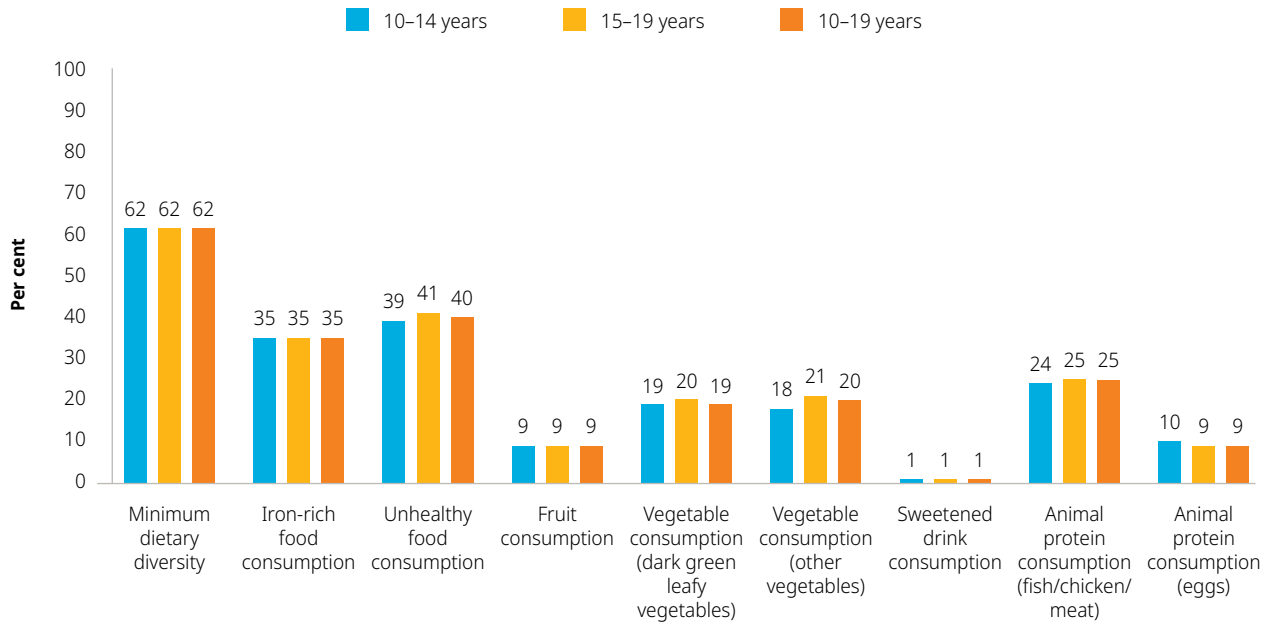
Source and sample: National Family Health Survey, 2015–2016 and 2019–2021, girls aged 15–19 years, including unmarried/married/pregnant: 2015–2016: n=121,730; 2019–2021: n=115,716.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; Hb: haemoglobin; g/dL: gram per decilitre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.25: Dietary practices in adolescent girls aged 10–19 years in India



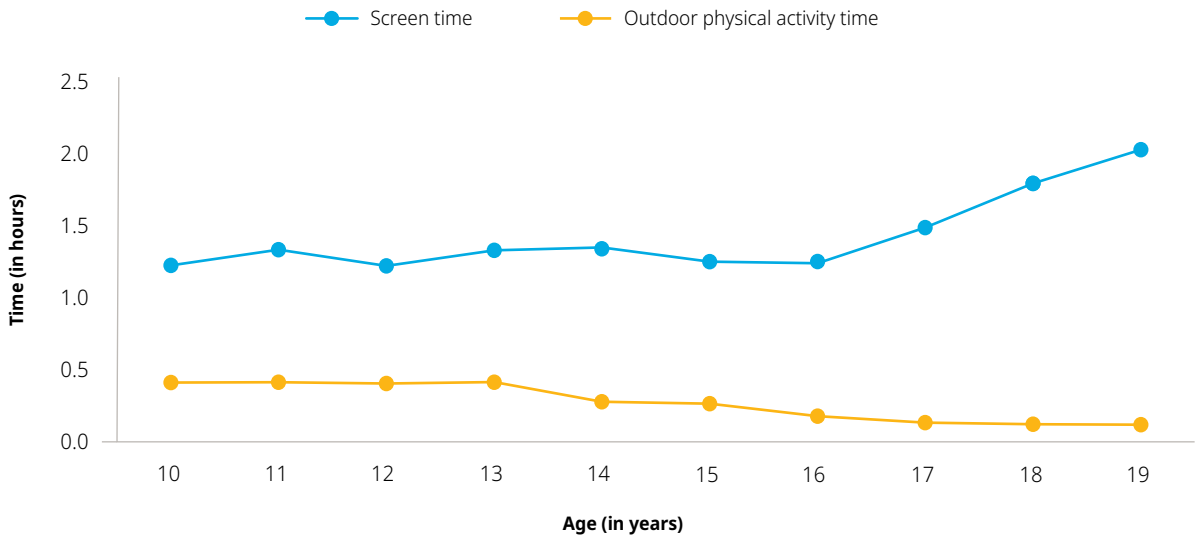
Source and sample: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, including unmarried/married (non-pregnant): n=17,405.

Definition: Minimum dietary diversity: consumption from five or more of nine food groups at least once in the last seven days from: (1) grains, white tubers and plantains; (2) pulses and beans; (3) nuts and seeds; (4) dairy; (5) meat, poultry and fish; (6) eggs; (7) dark green leafy vegetables; (8) fruits; and (9) other vegetables; iron-rich food consumption: consumption of one or more of meat, organ meat, fish or shellfish in the last seven days; unhealthy food consumption: consumed at least one of junk food, fried food, sweets or aerated drinks in the last seven days; fruit consumption: consumption of fruit at least once per day in the last seven days; vegetable consumption: consumption of vegetables (dark green leafy/other) at least once per day in the last seven days; sweetened drink consumption: consumption of carbonated soft drinks every day in the last seven days; animal protein (fish/chicken/meat) consumption: consumption of fish, chicken or meat two or more times in the last seven days; animal protein (eggs) consumption: consumption of eggs three or more times in the last seven days.

Acronyms: n: total number.

Physical activity and screen time

Figure A1.26: Physical activity and screen time in adolescent girls aged 10–19 years in India



Source and sample: Comprehensive National Nutrition Survey, 2016–2018, girls aged 10–19 years, unmarried/married/pregnant: n=17,405.

Note: The CNNS Thematic Reports, issue 1, 'Adolescents, Diets and Nutrition', 2019, reports that adolescent girls aged 10–19 years spent an average of approximately 2 hours per day sitting. (See Sethi, V., et al., *Adolescents, Diets and Nutrition: Growing well in a changing world,* The Comprehensive National Nutrition Survey, Thematic Reports, issue 1, New Delhi, 2019, <www.unicef.org/india/media/2631/file/CNNS-Thematic-Report-Adolescents-Diets-and-Nutrition.pdf>.)

Definition: Screen time: watching television, playing on computer, using smart phone; outdoor physical activity time: time spent doing physical activity, including football, basketball, volleyball, cricket, hockey, martial arts, rugby/kabbadi, running/jogging, swimming, cycling, tennis/badminton/squash, dancing, walking for exercise, stretching exercise, yoga, gym, aerobics and skipping. It does not include leisure time physical activity (for example, bike riding, household work or playing indoor games); sitting time: time spent sitting, for example, while doing homework, having tuition, reading, studying, eating or chatting.

Acronyms: CNNS: Comprehensive National Nutrition Survey; n: total number.

Programme availability and system bottlenecks

Table A1.4: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in India

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

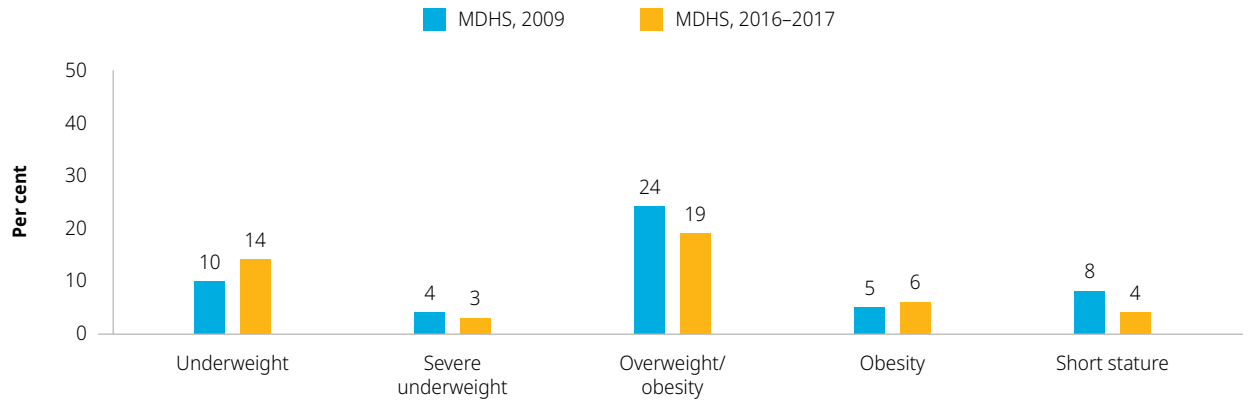
* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Maldives

Nutritional status

Figure A1.27: Anthropometric status in adolescent girls aged 15–19 years in Maldives



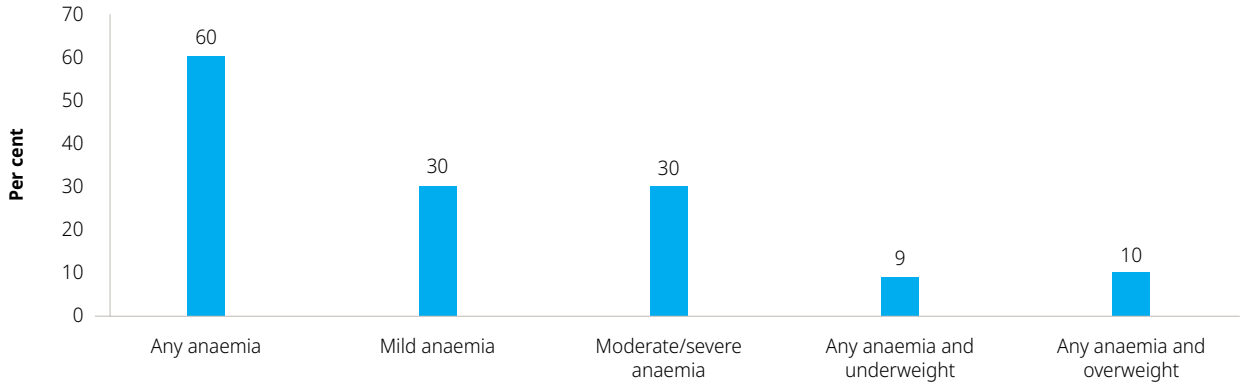
Source and sample: Maldives Demographic and Health Survey, 2009 and 2016–2017, girls aged 15–19 years, including married/pregnant (2009 and 2016–2017) and unmarried (2016–2017): Underweight, severe underweight, overweight/obesity, obesity: 2009: n=74, 2016–2017: n=930; short stature: 2009: n=98, 2016–2017: n=941.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; MDHS: Maldives Demographic and Health Survey; n: total number; SD: standard deviation; WHO: World Health Organization.

Anaemia status

Figure A1.28: Anaemia status in adolescent girls aged 15–19 years in Maldives



Source and sample: Maldives Demographic and Health Survey, 2016–2017, girls aged 15–19 years, including unmarried/married/pregnant/non-pregnant: Any/mild/moderate/severe anaemia: n=894; any anaemia and underweight/overweight: n=884.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; SD: standard deviation; WHO: World Health Organization.

Micronutrient deficiencies

Data not available.

Nutritional status by wealth quintile

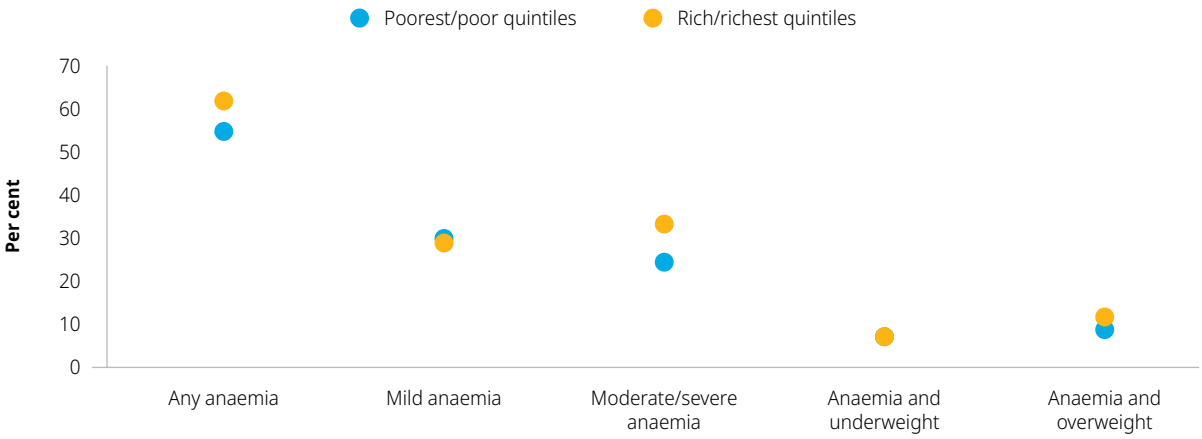
Figure A1.29: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Maldives

Source and sample: Maldives Demographic and Health Survey, 2016–2017, girls aged 15–19 years, including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: n=930; short stature: n=941.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Figure A1.30: Anaemia status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Maldives



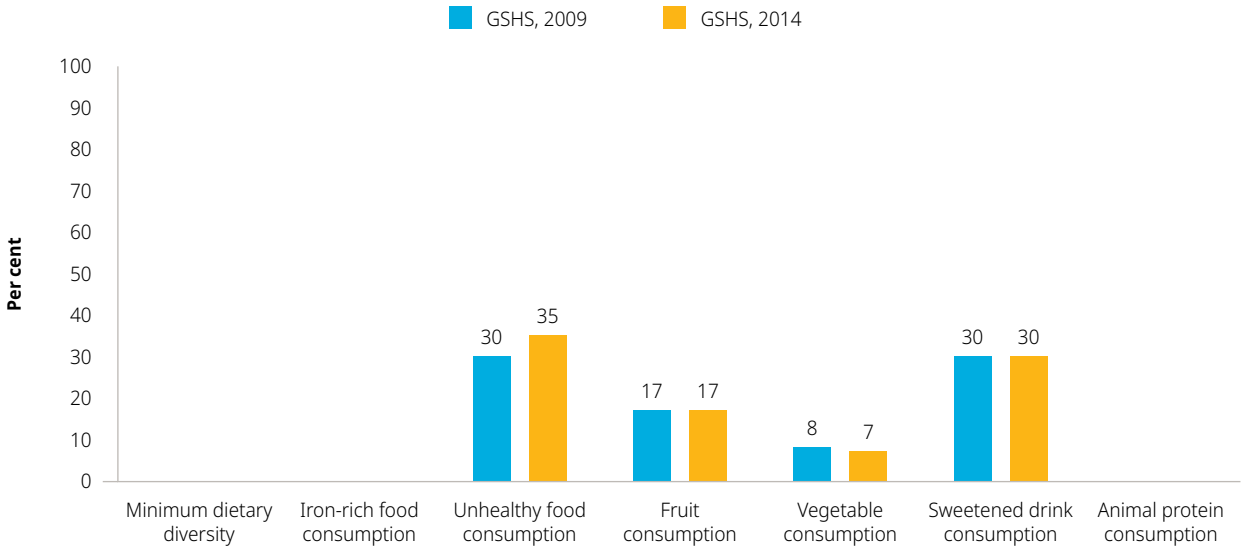
Source and sample: Maldives Demographic and Health Survey, 2016–2017, girls aged 15–19 years, including unmarried/married/pregnant/non-pregnant: Any/mild/moderate/severe anaemia: n=894; any anaemia and underweight/overweight: n=884.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Acronyms: BMI: body mass index; cm: centimetre; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.31: Dietary practices of adolescent girls aged 13–17 years in Maldives



Source and sample: Maldives Global School-Based Student Health Survey, 2009 and 2014, school-going girls aged 13–17 years: Unhealthy food consumption: 2009: n=1,688, 2014: n=1,725; fruit/vegetable consumption: 2009: n=1,689, 2014: n=1,713; sweetened drink consumption: 2009: n=1,689, 2014: n=1,722.

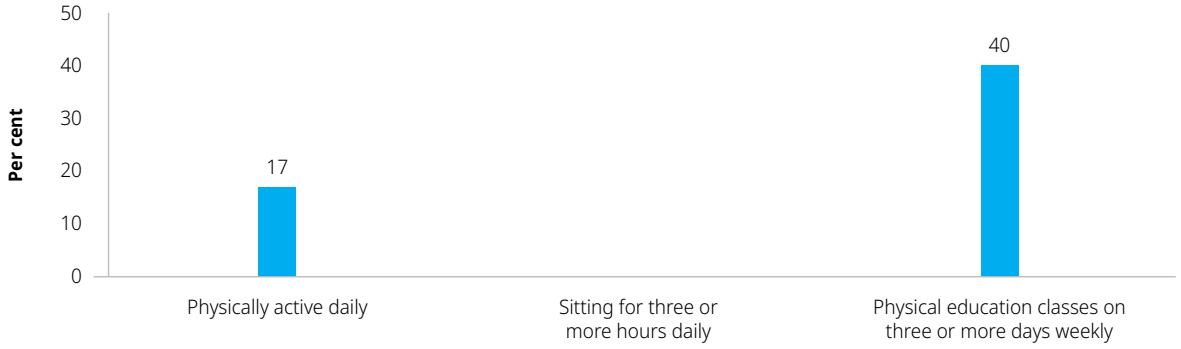
Note: Data not available for minimum dietary diversity and iron-rich food and animal protein consumption.

Definition: Unhealthy food consumption: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruits two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per day in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days.

Acronyms: GSHS: Global School-based Student Health Survey; n: total number.

Physical activity

Figure A1.32: Physical activity in school-going adolescent girls aged 13–17 years in Maldives



Source and sample: Maldives Global School-Based Student Health Survey, 2009, school-going girls aged 13–17 years: Physical activity: n=1,626; sitting: n=1,579.

Note: Data not available for sitting for three or more hours daily.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.5: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Maldives

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)**	NA	NA	NA	NA	NA	NA
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

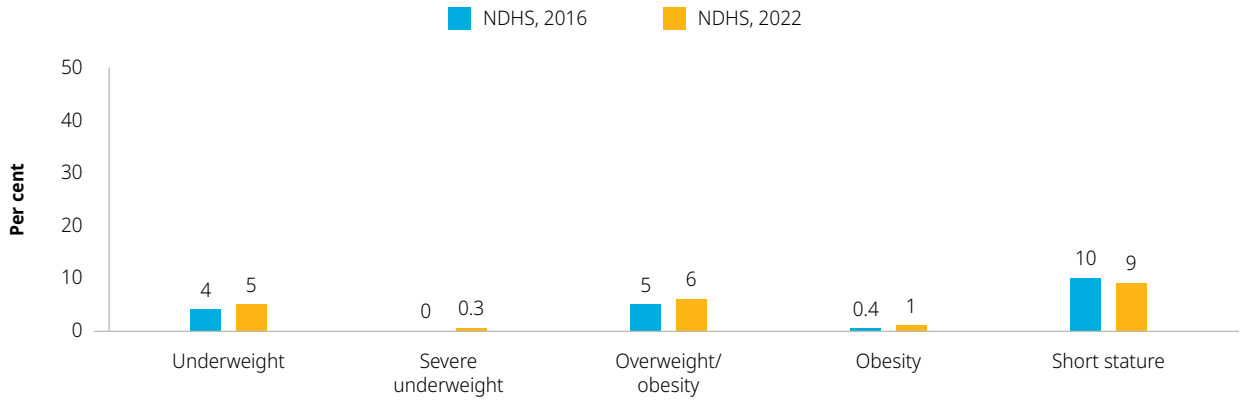
** Maldives has a school-based deworming programme targeting children up to 14 years of age. The worm load is low in Maldives and, as a result, the deworming programme is conducted as a voluntary programme in which deworming is given only with the parents' consent, as some parents may give deworming tablets at home on the advice of individual doctors or by the parents themselves.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Nepal

Nutritional status

Figure A1.33: Anthropometric status in adolescent girls aged 15–19 years in Nepal



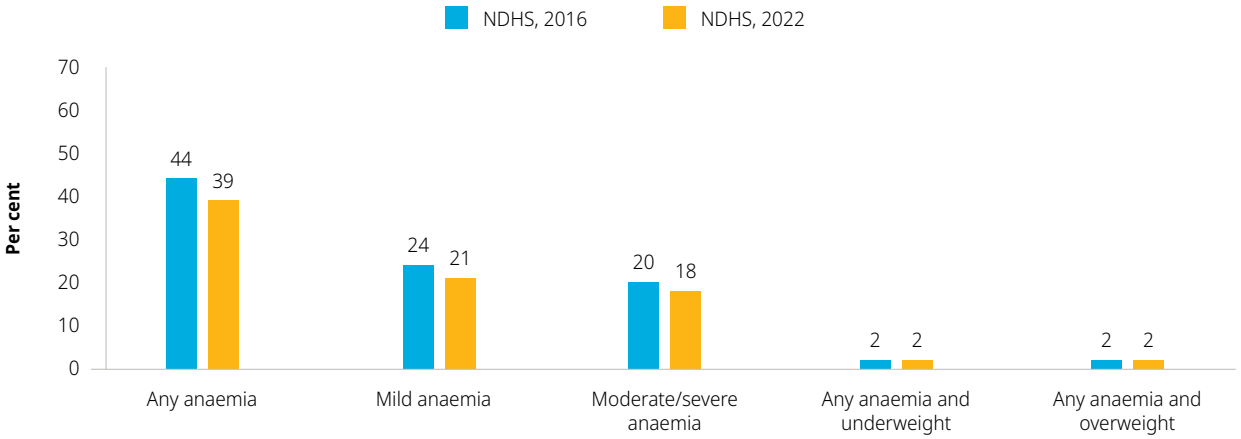
Source and sample: Nepal Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2016: n=1,239, 2022: n=1,314; short stature: 2016: n=1,324, 2022: n=1,314.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; NDHS: Nepal Demographic and Health Survey; SD: standard deviation; WHO: World Health Organization.

Anaemia status

Figure A1.34: Anaemia status in adolescent girls aged 15–19 years in Nepal



Source and sample: Nepal Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years including unmarried/married/pregnant: Any/mild/moderate/severe anaemia: 2016: n=1,316, 2022: n=1,385; any anaemia and underweight/overweight: 2016: n=1,231, 2022: n=1,311.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; NDHS: Nepal Demographic and Health Survey; SD: standard deviation; WHO: World Health Organization.

Micronutrient deficiencies

Figure A1.35: Micronutrient deficiencies in adolescent girls aged 10–19 years in Nepal

Figure A1.35a: Iron, folate, vitamin A and zinc deficiencies (10–19 years)

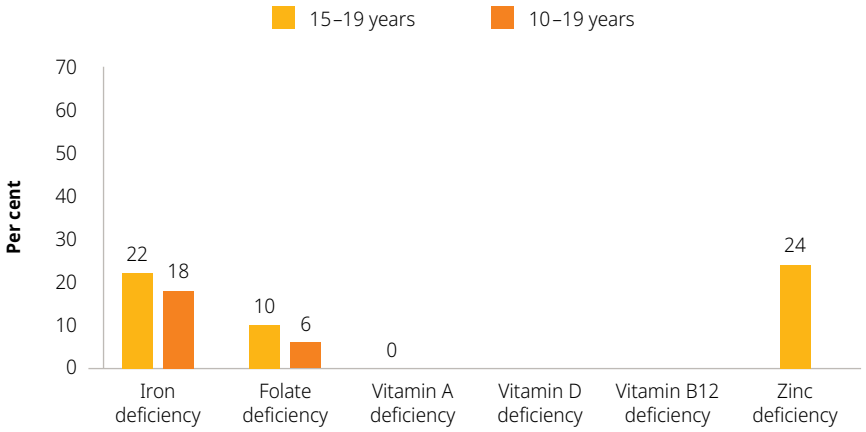
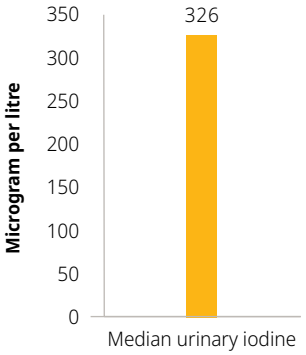


Figure A1.35b: Iodine deficiency (15–19 years)



Source and sample: Nepal National Micronutrient Status Survey report, 2016, girls aged 10–19 years, including unmarried/married/non-pregnant: 15–19 years: n=234; 10–19 years: Iron deficiency: n=1,840; folate deficiency: n=1,842.

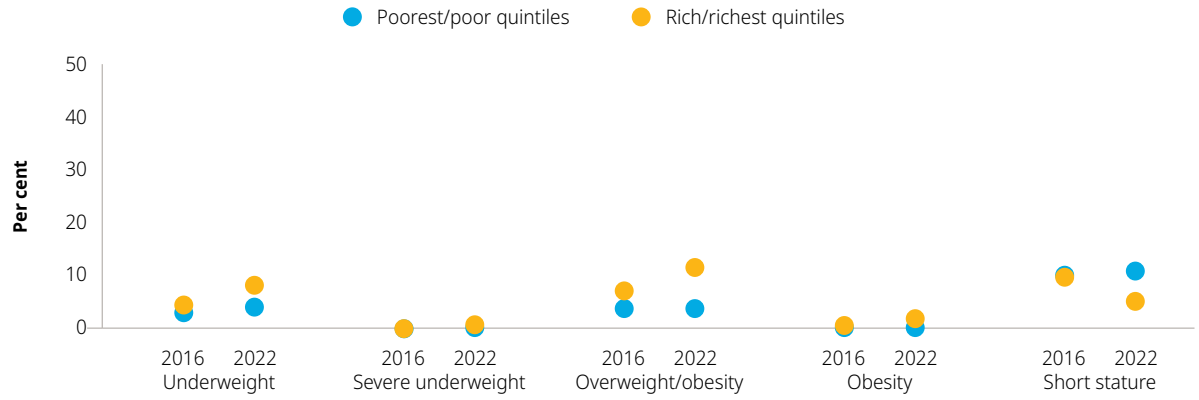
Note: Data not available for vitamin D and B12 deficiencies.

Definition: Iron deficiency=ferritin <15.0 mcg/L; folate deficiency=RBC folate <226.5 nmol/L; vitamin A deficiency: mean MRDR ≥0.060; zinc deficiency=serum zinc <66 mcg/dL (morning non-fasting) or 59 mcg/dL (afternoon non-fasting); iodine deficiency: median urinary iodine concentration >100 mcg/L.

Abbreviations and acronyms: mcg/dL: microgram per decilitre; mcg/L: microgram per litre; MRDR: modified relative dose response; n: total number; nmol/L: nanomole per litre, RBC: red blood cell.

Nutritional status by wealth quintile

Figure A1.36: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Nepal



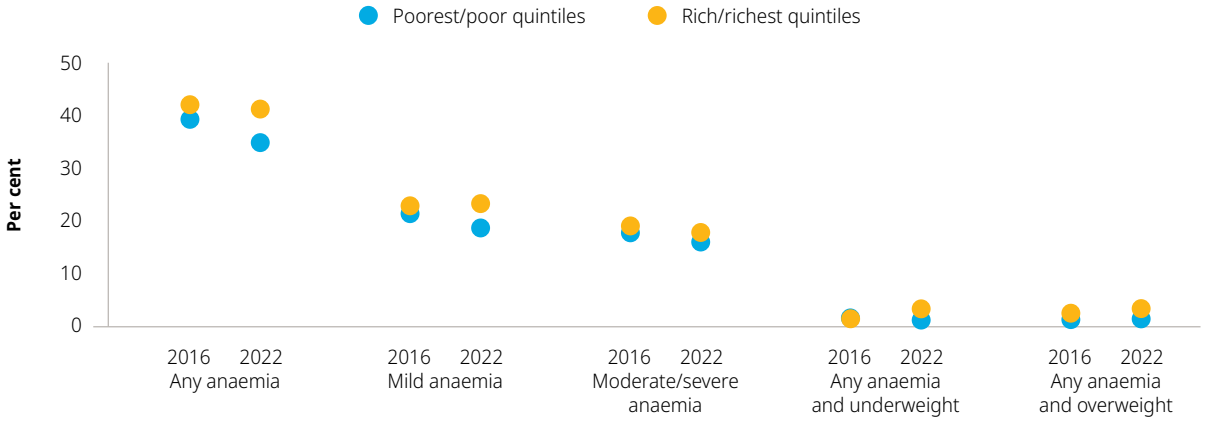
Source and sample: Nepal Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years, unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2016: n=1,239, 2022: n=1,314; short stature: 2016: n=1,324, 2022: n=1,314.

Note: Severe underweight and obesity statistics based on fewer than 25 cases.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Figure A1.37: Anaemia status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Nepal



Source and sample: Nepal Demographic and Health Survey, 2016 and 2022, girls aged 15–19 years, unmarried/married/pregnant: 2016: n=1,316; 2022: n=1,385.

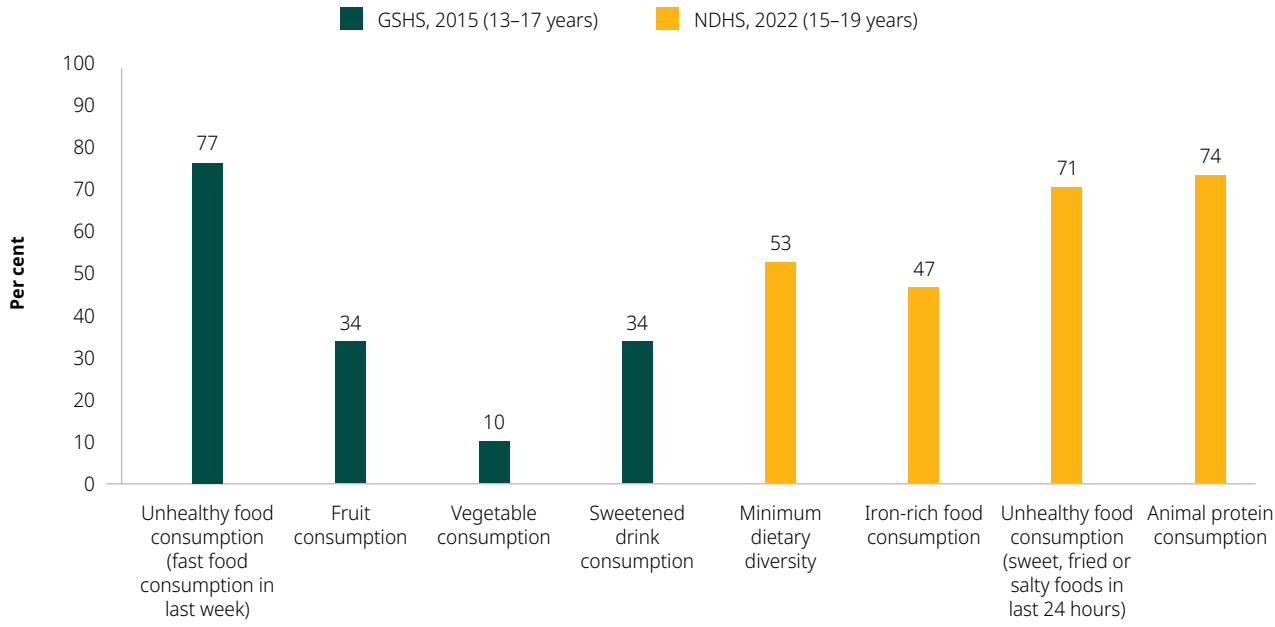
Note: Any anaemia and underweight/overweight statistics for 2016 are based on fewer than 25 cases.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; g/dL: gram per decilitre; Hb: haemoglobin; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.38: Dietary practices in adolescent girls aged 13–19 years in Nepal



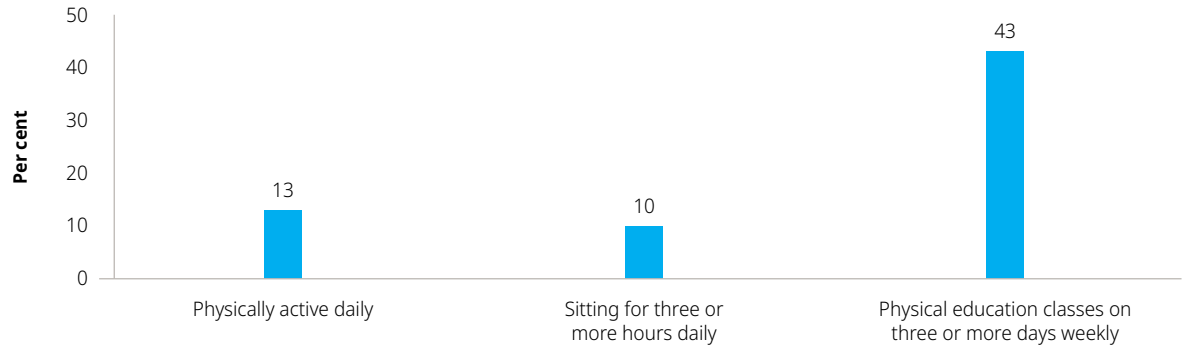
Source and sample: Nepal Demographic and Health Survey, 2022, girls aged 15–19 years, including unmarried/married/pregnant: n=2,777. Nepal Global School-Based Student Health Survey, 2015, school-going girls aged 13–17 years: Unhealthy food consumption: n=2,986; fruit/vegetable consumption: n=2,978; sweetened drink consumption: n=2,995.

Definition: Minimum dietary diversity: consumption from 5 of 10 food groups in the 24 hours preceding the survey from (1) grains, white tubers and plantains; (2) pulses; (3) vegetables; (4) dark green leafy vegetables; (5) dairy; (6) meat, poultry and fish; (7) fruits; (8) other vitamin A-rich fruits and vegetables; (9) eggs; and (10) nuts and seeds; iron-rich food consumption: consumption of one or more of meat, organ meat, egg and fish or shellfish in the 24 hours preceding the survey; unhealthy food consumption: NDHS: consumed sweets, fried foods or salty foods (including cakes, biscuits, jeri/jalebi, mithai, toffees and ice cream, chips, kurkure, cheese balls, instant noodles, samosas and *tareko khaja* [fried snacks]) in the 24 hours preceding the survey; GSHS: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruit two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days; animal protein consumption: consumption of animal protein at least once in the 24 hours preceding the survey.

Acronyms: GSHS: Global School-Based Student Health Survey; n: total number; NDHS: Demographic and Health Survey.

Physical activity

Figure A1.39: Physical activity in school-going adolescent girls aged 13–17 years in Nepal



Source and sample: Nepal Global School-Based Student Health Survey, 2015, school-going girls aged 13–17 years: Physical activity: n=2,945, sitting: n=2,968, physical education: n=2,910.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.6: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Nepal

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

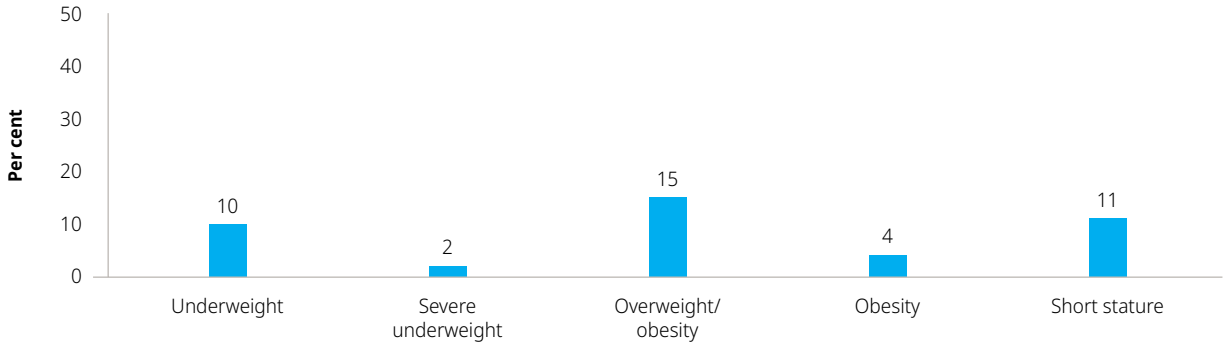
* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Pakistan

Nutritional status

Figure A1.40: Anthropometric status in adolescent girls aged 15–19 years in Pakistan



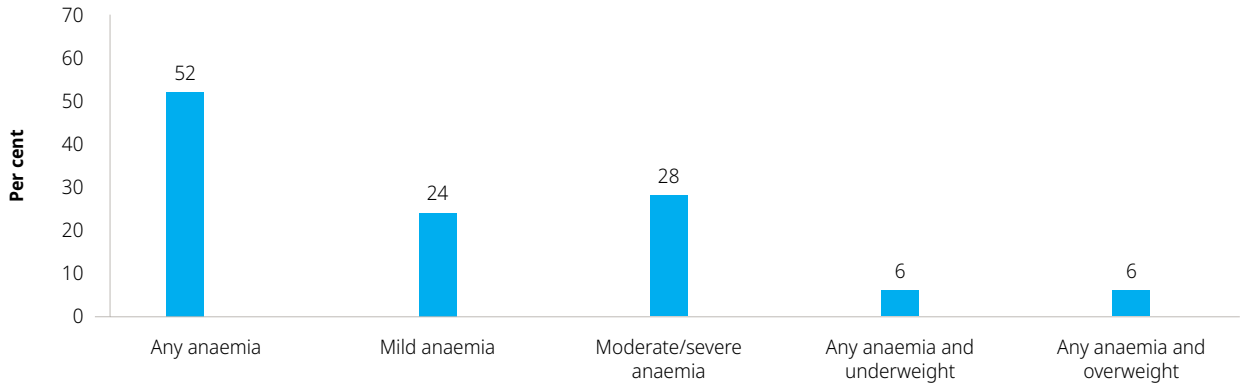
Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: n=20,087; short stature: n=19,305.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; WHO: World Health Organization.

Anaemia status

Figure A1.41: Anaemia status in adolescent girls aged 15–19 years in Pakistan



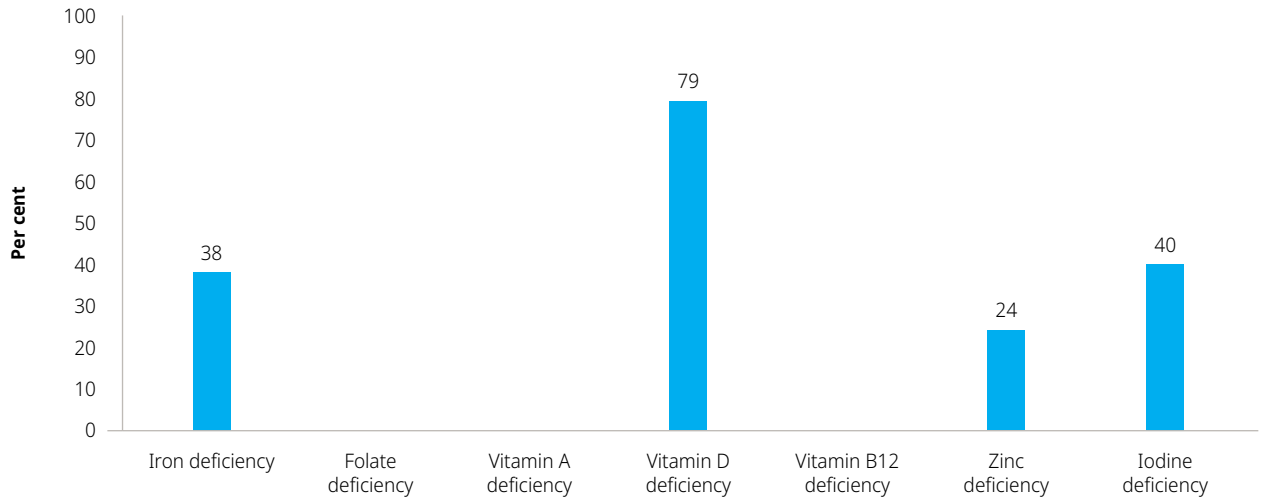
Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: n=7,464.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; Hb: haemoglobin; g/dL: gram per decilitre; n: total number; SD: standard deviation; WHO: World Health Organization.

Micronutrient deficiencies

Figure A1.42: Micronutrient deficiencies in adolescent girls aged 15–19 years in Pakistan by type of deficiency



Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: Iron, zinc and vitamin D deficiency: n=974; iodine deficiency: n=133.

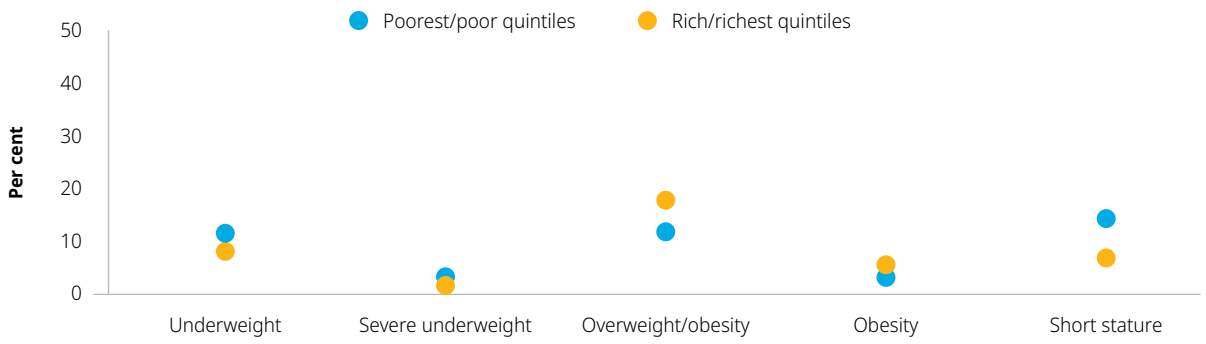
Note: Data not available for folate, vitamin A and vitamin B12 deficiencies.

Definition: Iron deficiency=ferritin <15.0 mcg/L; vitamin D deficiency=25(OH)D <20 ng/mL; zinc deficiency=serum zinc <60 mcg/dL; iodine deficiency=median urinary iodine concentration <100 mcg/L.

Abbreviations and acronyms: mcg/dL: microgram per decilitre; mcg/L: microgram per litre; n: total number; ng/mL: nanogram per millilitre; 25(OH)D: the major circulating form of vitamin D and is a summation of both vitamin D intake and vitamin D that is produced from sun exposure.

Nutritional status by wealth quintile

Figure A1.43: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Pakistan

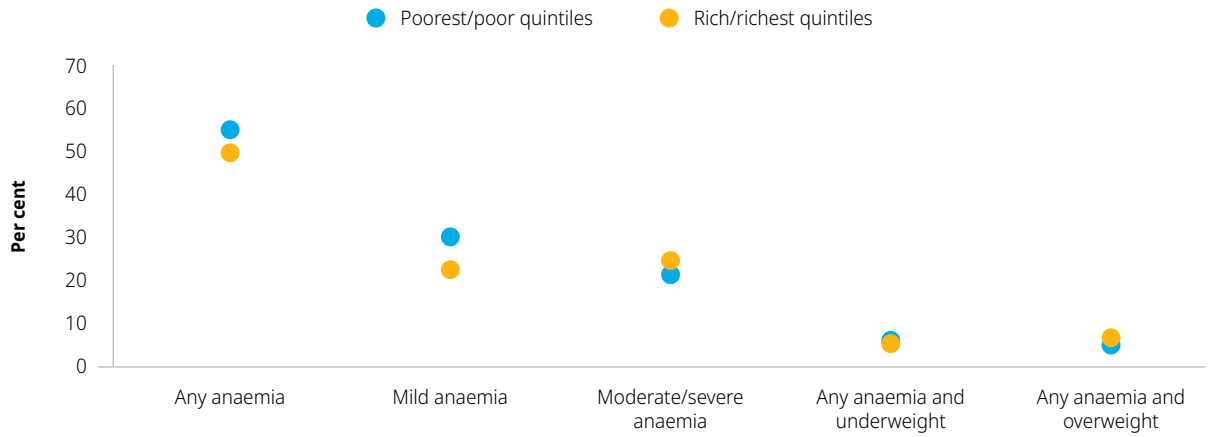


Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: n=20,087; short stature: n=19,305.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score > +1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Figure A1.44: Anaemia status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Pakistan



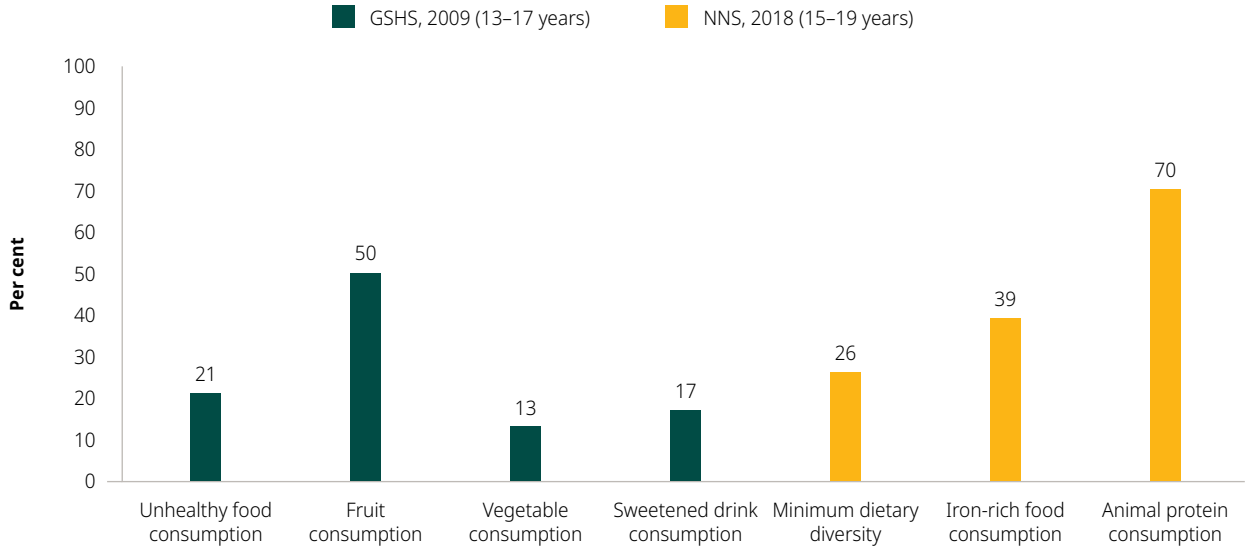
Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant: n=7,464.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; Hb: haemoglobin; g/dL: gram per decilitre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.45: Dietary practices in adolescent girls aged 13–19 years in Pakistan



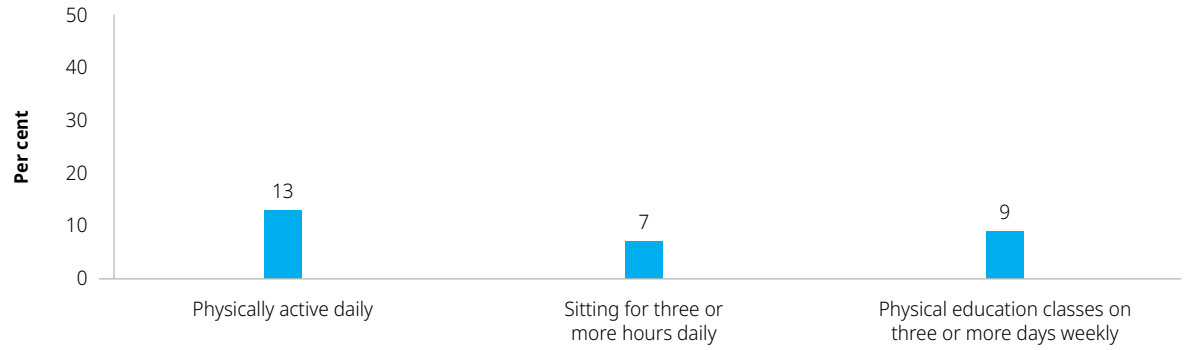
Source and sample: Pakistan National Nutrition Survey, 2018, girls aged 15–19 years, including unmarried/married/pregnant, n=11,822. Pakistan Global School-Based Student Health Survey, 2009, school-going girls aged 13–17 years: Unhealthy food consumption: n=1,261; fruit/vegetable consumption: n=1,263; sweetened drink consumption: n=1,255.

Definition: Minimum dietary diversity: consumption from 5 or more of 10 food groups at least once in the last seven days from (1) grains, white tubers and plantains; (2) pulses; (3) nuts and seed; (4) dairy; (5) poultry, fish and meat; (6) eggs; (7) dark green leafy vegetables; (8) vitamin-A-rich fruits and vegetables; (9) other fruits; and (10) other vegetables; iron-rich food: consumption of one or more of poultry, meat, organ meat and fish or shellfish in the 24 hours preceding the survey; unhealthy food consumption: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruit two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per day in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days; animal protein consumption: consumption of animal protein at least once in the 24 hours preceding the survey.

Acronyms: GSHS: Global School-Based Student Health Survey; n: total number; NNS: National Nutrition Survey.

Physical activity

Figure A1.46: Physical activity in school-going adolescent girls aged 13–17 years in Pakistan



Source and sample: Pakistan Global School-Based Student Health Survey, 2009, school-going girls aged 13–17 years: Physical activity: n=1,242; sitting: n=1,260; physical education: n=1,255.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.7: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Pakistan

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)						
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

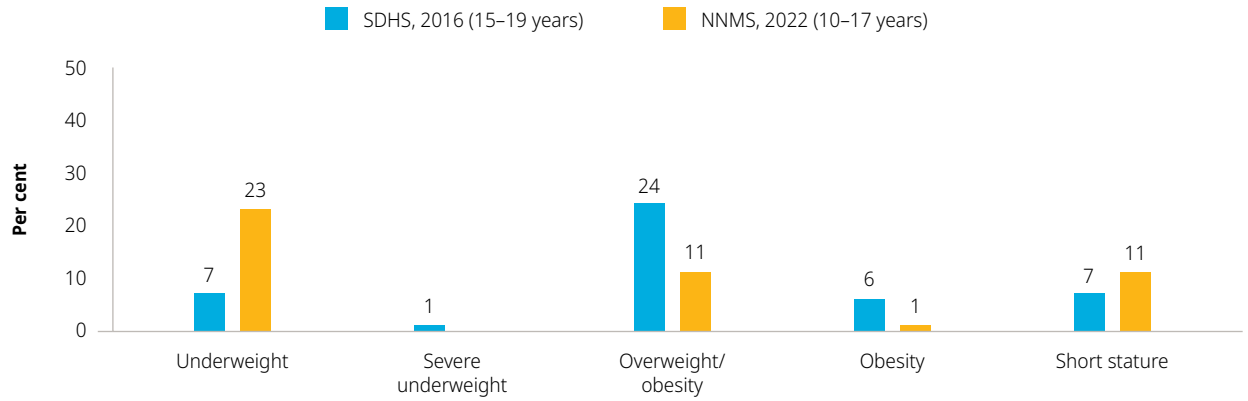
* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Sri Lanka

Nutritional status

Figure A1.47: Anthropometric status in adolescent girls aged 10–19 years in Sri Lanka



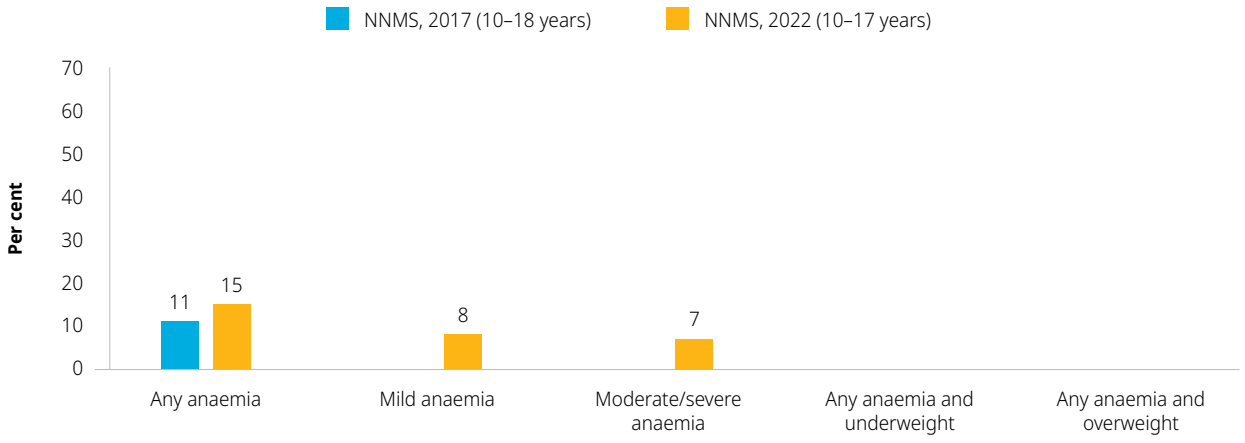
Source and sample: Sri Lanka Demographic and Health Survey, 2016; girls aged 15–19 years, including married/pregnant; Sri Lanka National Nutrition and Micronutrient Survey, 2022, girls aged 10–17 years, including unmarried/married/pregnant: Underweight, severe underweight, overweight/obesity, obesity: 2016: n=181, 2022: n=244; short stature: 2016: n=219, 2022: n=244.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; n: total number; NMNS: National Nutrition and Micronutrient Survey; SD: standard deviation; SDHS: Sri Lanka Demographic and Health Survey; WHO: World Health Organization.

Anaemia status

Figure A1.48: Anaemia status in adolescent girls aged 10–18 years in Sri Lanka



Source and sample: Sri Lanka National Nutrition and Micronutrient Survey, 2017 and 2022, girls aged 10–18 years, including unmarried/married/pregnant: 2017: n=1,373; 2022: n=475.

Note: Data not available for any anaemia and underweight/overweight.

Definition: Any anaemia=Hb <11.0 g/dL for pregnant and <12.0 g/dL for non-pregnant; mild anaemia=Hb 10.0–10.9 g/dL for pregnant and 11.0–11.9 g/dL for non-pregnant; moderate/severe anaemia=Hb 7.0–9.9 g/dL for pregnant and <8.0–10.9 g/dL for non-pregnant; underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; Hb: haemoglobin; g/dL: gram per decilitre; n: total number; NMNS: National Nutrition and Micronutrient Survey; SD: standard deviation; SDHS: Sri Lanka Demographic and Health Survey; WHO: World Health Organization.

Micronutrient deficiencies

Figure A1.49: Micronutrient deficiencies in adolescent girls aged 10–18 years in Sri Lanka

Figure A1.49a: Iron, vitamin A, vitamin D and zinc deficiencies

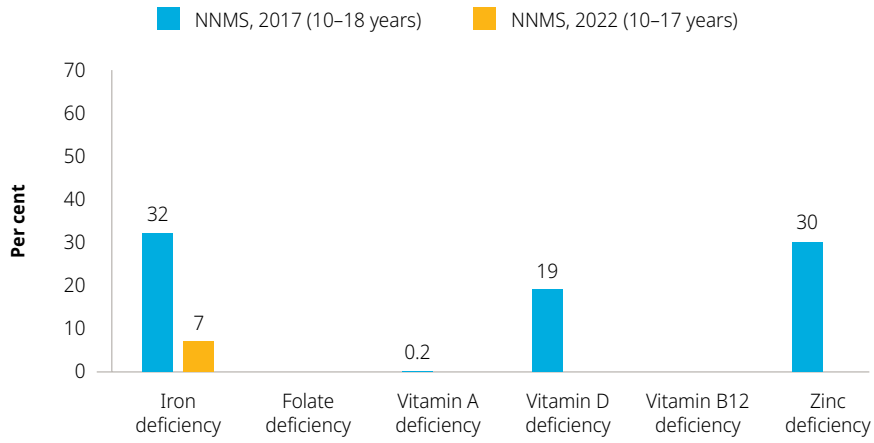
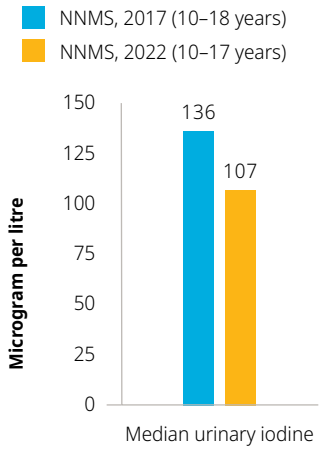


Figure A1.49b: Iodine deficiency



Source and sample: Sri Lanka National Nutrition and Micronutrient Survey, 2017 and 2022, published reports, school-going girls aged 10–18 years (2017) and 10–17 years (2022), including unmarried/married/pregnant: Iron deficiency: 2017: n=1,347, 2022: n=missing; vitamin A deficiency: 2017: n=1,373; vitamin D deficiency: 2017: n=1,347; zinc deficiency: 2017: n=1,233; iodine deficiency: 2017: n=1,221, 2022: n=199.

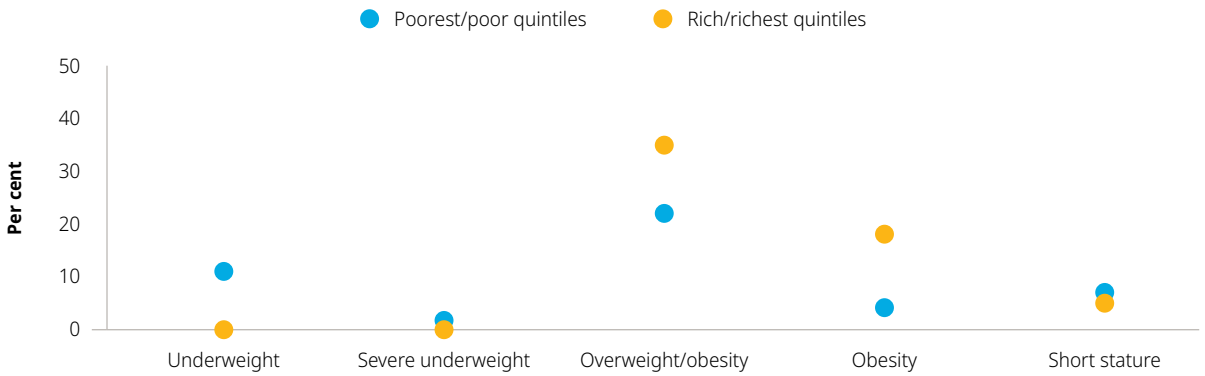
Note: Data not available for folate and vitamin B12 deficiencies.

Definition: Iron deficiency=serum ferritin <15.0 mcg/L; vitamin A deficiency=serum retinol <20 mcg/dL; vitamin D deficiency=total 25-hydroxycholecalciferol <12 mcg/dL; zinc deficiency=serum zinc <65 mcg/dL or 59 mcg/dL; iodine deficiency=median urinary iodine concentration <100 mcg/L.

Abbreviations and acronyms: mcg/dL: microgram per decilitre; mcg/L: microgram per litre; n: total number; NNMS: National Nutrition and Micronutrient Survey.

Nutritional status by wealth quintile

Figure A1.50: Anthropometric status in adolescent girls aged 15–19 years in poorest/poor vs rich/richest wealth quintiles in Sri Lanka



Source and sample: Sri Lanka Demographic and Health Survey, 2016, girls aged 15–19 years: Underweight, severe underweight, overweight/obesity, obesity: n=181; short stature: n=219.

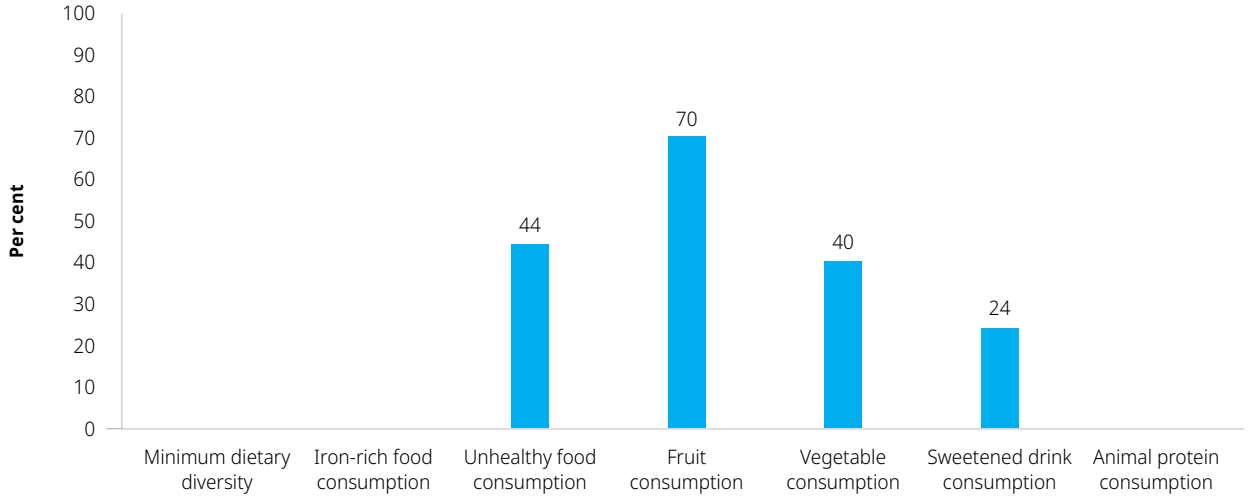
Note: Underweight, severe underweight, obesity and short stature statistics are based on fewer than 25 cases.

Definition: Underweight=BMI-for-age Z score <-2 SD of WHO child growth standards median; severe underweight=BMI-for-age Z score <-3 SD of WHO child growth standards median; overweight/obesity=BMI-for-age Z score >+1 SD of WHO child growth standards median; obesity=BMI-for-age Z score >+2 SD of WHO child growth standards median; short stature=height <145 cm.

Acronyms: BMI: body mass index; cm: centimetre; n: total number; SD: standard deviation; vs: versus; WHO: World Health Organization.

Dietary practices

Figure A1.51: Dietary practices in adolescent girls aged 13–17 years in Sri Lanka



Source and sample: Sri Lanka Global School-Based Student Health Survey, 2016, school-going girls aged 13–17 years: Unhealthy food consumption: n=1,762; fruit/vegetable consumption: n=1,751; sweetened drink consumption: n=1,759.

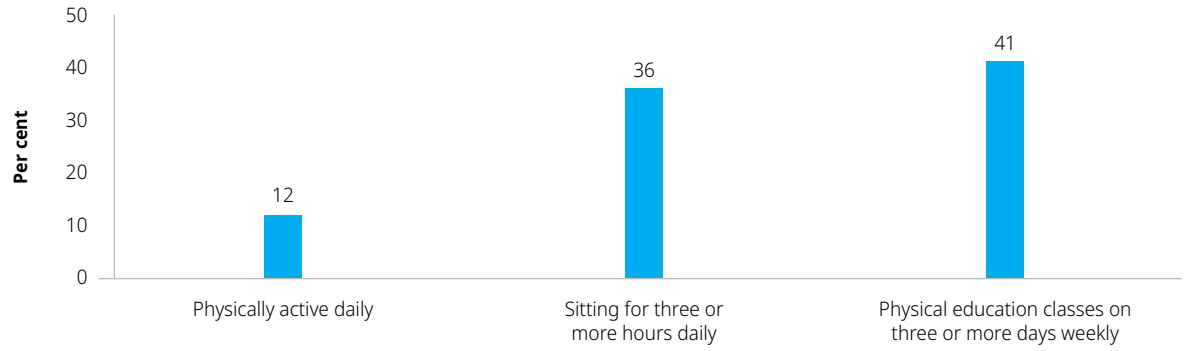
Note: Data not available for minimum dietary diversity and iron-rich food and animal protein consumption.

Definition: Unhealthy food consumption: ate at a fast food restaurant on at least one day in the last seven days; fruit consumption: consumption of fruit two or more times per day in the last 30 days; vegetable consumption: consumption of vegetables three or more times per day in the last 30 days; sweetened drink consumption: consumption of carbonated soft drinks one or more times per day in the last 30 days.

Acronyms: n: total number.

Physical activity

Figure A1.52: Physical activity in school-going adolescent girls aged 13–17 years in Sri Lanka



Source and sample: Sri Lanka Global School-Based Student Health Survey, 2016, girls aged 13–17 years: Physical activity: n=1,756; sitting: n=1,761; physical education: n=1,753.

Definition: Physically active daily: physically active at least 60 minutes per day every day in the seven days before the survey; sitting for three or more hours daily: ≥3 hours per day doing sitting activities (sitting and watching television, playing computer games, talking with friends when not in school or doing homework during a typical or usual day); physical education classes on three or more days weekly: attended physical education classes on 3 or more days (each week during this school year).

Acronyms: n: total number.

Programme availability and system bottlenecks

Table A1.8: Programme availability and severity of system bottlenecks* impeding effective implementation of the 12 nutrition interventions in Sri Lanka

No bottleneck	
Mild bottleneck	
Moderate bottleneck	
Significant bottleneck	
No programme	
NA: Not applicable; programme not needed as per context	NA

Domain	Intervention		Programme					
			Legislation and policies	Leadership, governance and coordination	Supplies	Budgets and Financing	Data and information systems	Workforce
Access to nutritious foods, in schools and beyond	1.	School meals						
Micronutrient supplementation and deworming prophylaxis	2.	Weekly iron and folic acid (WIFA) supplementation						
	3.	Preventive deworming (context-specific)**	NA	NA	NA	NA	NA	NA
Nutrition and lifestyle education	4a.	Nutrition and health education in schools and beyond						
	4b.	Nutrition chapters in school education curriculum						
	5.	Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) as designated time periods in schools						
	6.	Screen time (<120 minutes/day)						
Healthy food environments, in and around schools	7.	Restrictions on television advertising for unhealthy foods						
	8.	Unhealthy food and beverage taxes						
	9.	Nutrition front-of-pack labelling						
	10.	Ban on marketing and sale of junk food in and around school premises***						
Nutrition assessment and screening and special nutrition package for adolescent girls at nutritional risk	11a.	Nutrition assessment (height, weight, haemoglobin)						
	11b.	Nutrition assessment using BMI-for-age Z score growth charts						
	12.	Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)						

* Classification of the severity of the bottleneck is based on criteria presented in Annex 3.

** The programme is not needed because the worm load is below the cut-off for initiating a deworming programme.

*** Sri Lanka's programme only bans the marketing and sale of junk food within school premises. There is no policy for marketing and sales around school premises.

Note: Bottlenecks are not classified for interventions for which there is no current programme.

Annex 2: Policies and programmes reviewed in South Asia

Annex 2a: Policies and programmes reviewed in Afghanistan and Bangladesh

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
1. School meals	Yes **School Health Policy, 2019–2029** Aims for all schools to provide healthy and appealing diets to students according to Ministry of Education (MoE) and Ministry of Public Health (MoPH) guidelines for hygiene and nutrition. <www.dropbox.com/s/t4ou1ikdohlwotm/MoE%20School%20Health%20Policy_English_%20Draft%20July%2018%202019.docx?e=3&dl=0>	Yes (in selected provinces) **School meals programme** Covers adolescent girls aged 10–13 years in 2,775 primary schools in seven provinces under a school feeding programme provided by the World Food Programme.	Yes **National School Meal Policy, 2019** Aims to provide a cooked meal (fulfilling minimum 30% calorie needs) for five days and fortified biscuits for one day (primary schools run six days a week) for pre-primary and primary school students. <https://educationcommission.org/wp-content/uploads/2022/12/SFI-Country-Case-Study-Bangladesh-April-2022.pdf>	Yes (in some geographies) **School Feeding Programme, 2011 (Poverty-prone areas)** Provides 75-gram packet of vitamin- and mineral-fortified biscuits (338 kcal/day and 67% of daily micronutrient requirement) for six days a week. **Hot cooked nutritious meal on a trial basis** Provides 536 kcal and 50% of daily micronutrient recommendation to students in primary schools in three regions. These schools do not receive fortified biscuits except on Thursdays when they do not get a hot meal. <https://centrodeexcelencia.org.br/en/bangladesh-aprova-politica-de-alimentacao-escolar>
2. Weekly iron and folic acid (WIFA) supplementation	Yes **School Health Policy, 2019–2029** Enables MoPH/MoE to provide weekly iron and folic acid supplementation (WIFS) to adolescent girls.	Yes (in selected geographies) **Doorstep Community WIFS (C-WIFS) Programme** Provides weekly iron and folic acid (IFA) to unmarried adolescent girls aged 10–19 years at home/community centres through community volunteers since adolescent girls are not allowed to attend school in the current situation.	Yes **National Strategy on Prevention and Control of Micronutrient Deficiencies, Bangladesh, 2015–2024** Recommends weekly supplementation with two tablets, each having 60 mg elemental iron and 400 mcg folic acid, for adolescent girls. <www.unicef.org/bangladesh/media/4646/file/NMDCS%20Final.pdf%20.pdf>	Yes (universal) **School Health Program** Provides weekly IFA supplementation to adolescent girls aged 13–19 years through schools. **National Nutrition Services** Provides weekly IFA supplements to out-of-school girls aged 13–19 years at community level through Adolescent Community Clubs.

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
			National Strategy for Adolescent Health, 2017–2030 Aims to provide and promote micronutrient supplementation (i.e., IFA and multiple micronutrient supplementation) to adolescents at health facilities, schools and workplaces. <www.unicef.org/bangladesh/sites/unicef.org.bangladesh/files/2018-10/National-Strategy-for-Adolescent-Health-2017-2030.pdf>	
3. Preventive deworming (context-specific)	Yes **School Health Policy, 2019–2029** Enables MoPH and partners to regularly provide deworming/antiparasitic medicines to schoolchildren as a preventive service.	Yes (in selected geographies) **Annual deworming programme** Provides deworming medicine once per year to school-going children in some provinces under a donor-supported programme.	Yes **National Strategy for Adolescent Health, 2017–2030** Aims to provide and promote deworming at health facilities, schools and workplaces. **National Strategy on Prevention and Control of Micronutrient Deficiencies, Bangladesh, 2015–2024** Recommends deworming for adolescent girls aged 13–19 years at facility and community level. <www.unicef.org/bangladesh/media/4646/file/NMDCS%20Final.pdf%20.pdf>	Yes (universal) **School Health Program** Provides biannual deworming to adolescent girls aged 13–19 years through schools. **National Nutrition Services** Provides biannual deworming to out-of-school girls aged 13–19 years through Adolescent Community Clubs at community level.

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
4a. Nutrition and health education in schools and beyond	Yes **School Health Policy, 2019–2029** Provides for MoE to assist Ministry of Rural Rehabilitation and Development, MoPH and partners in working with communities and families to build their awareness of health and nutrition topics, such as physical activity, healthy diets, mental health and other healthy behaviours.	No	Yes **National Strategy for Adolescent Health, 2017–2030** Aims to mainstream nutrition education into the health care system, education system as well as other systems that reach out-of-school adolescents. Aims to conduct community-based awareness campaigns on the importance of good nutrition, healthy foods and the consequences of malnutrition, anaemia and obesity on the overall development and growth of adolescents. **Second National Plan of Action for Nutrition, 2016–2025** Plans to scale up formal and non-formal nutrition education and behaviour change communication programmes on balanced diets for adolescents and healthy cooking practices through mass media and community awareness programmes. <https://faolex.fao.org/docs/pdf/bgd206820.pdf> **National Nutrition Policy, 2015** Extends and strengthens nutrition education in educational institutions. <https://faolex.fao.org/docs/pdf/bgd152517.pdf>	Yes (universal) **Package of Nutrition Interventions for Adolescents at Secondary Schools** Provides for quarterly nutrition education sessions to promote dietary diversity conducted by peer leaders and peer educators, along with guide teachers.

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
4b. Nutrition chapters in school education curriculum	Yes **School Health Policy, 2019–2029** Provides for health education including nutrition to be embedded in the curriculum (at preschool, primary and secondary school levels), which will be taught as an independent subject to both boys and girls. **Afghanistan Food Security and Nutrition Plan, 2019–2023** Aims to integrate nutrition into primary and secondary school curriculum. <https://faolex.fao.org/docs/pdf/afg191005.pdf>	No	Yes **Second National Plan of Action for Nutrition, 2016–2025** Aims to update nutrition education modules and incorporate them into secondary and higher secondary curriculum.	Yes (universal) **Package of Nutrition Interventions for Adolescents at Secondary Schools** Provides for quarterly nutrition education sessions to promote dietary diversity conducted by peer leaders and peer educators, along with guide teachers.
5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond	Yes **School Health Policy, 2019–2029** Aims to ensure mandatory physical activity at school, such as 10 minutes of stretching and warm-up exercise before starting classes; at least a two-minute stretching exercise between subjects; and practical physical activity sessions as part of the curriculum.	No	Yes **National Strategy for Adolescent Health, 2017–2030** Promotes and improves access to sports and physical activity in the community, schools and workplace. <www.unicef.org/bangladesh/sites/unicef.org.bangladesh/files/2018-10/National-Strategy-for-Adolescent-Health-2017-2030.pdf> **Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases, 2018–2025** Aims to integrate physical activity promotion in schools. <https://extranet.who.int/ncdccs/Data/BGD_B3_MSAP%202018-2025%20english.pdf>	Yes (universal) **Package of Nutrition Interventions for Adolescents at Secondary Schools** Incorporates vigorous-intensity physical activities, such as aerobics, karate and local games, including those that strengthen muscle and bone, at least three times per week. <https://stage-adolescent-health.dnet.org.bd/uploads/policy_guideline/1622537604_OperationalGuidelinesforAdolescentnutritioninterventionforSchool-English.pdf>

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
			Non-Communicable Disease Control, Operational Plan, January 2017 – June 2022 Promotes physical activity in schools in built and natural environments, supporting physical activity in schools, universities, workplaces and health facilities. <https://extranet.who.int/ncdccs/Data/BGD_B3_OP_NCDC_04%20May%202017.docx>	
6. Screen time (<120 minutes/day)	No	No	No	No
7. Restrictions on television advertising for unhealthy foods	No	No	Yes **Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases, 2018–2025** Aims to conduct counter advertisement and ban advertising, promotion and sponsorship of unhealthy diets.	No
8. Unhealthy food and beverage taxes	No	No	Yes **Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases, 2018–2025** Proposes high tax on energy drinks/beverage.	No

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
9. Nutrition front-of-pack labelling	No	No	Yes **Non-Communicable Disease Control, Operational Plan, January 2017 – June 2022** Promotes nutritional labelling, according to but not limited to international standards, in particular the Codex Alimentarius, for all pre-packaged foods, including those for which nutrition or health claims are made.	No
10. Ban on marketing and sale of junk food in and around school premises	No	No	No	No
11a. Nutrition assessment (height, weight, haemoglobin)	Yes	No	Yes **Operational Guideline for Implementation of the Package of Nutrition Interventions for Adolescents at Secondary Schools, 2019** Recommends weight and height monitoring at the beginning of the school calendar year by peer leaders and peer educators. <https://stage-adolescent-health.dnet.org.bd/uploads/policy_guideline/1622537604_OperationalGuidelinesforAdolescentnutritioninterventionforSchool-English.pdf>	Yes (universal) **Package of Nutrition Interventions for Adolescents at Secondary Schools (Standard 6 to 10)** Provides for weight and height monitoring at the beginning of the school calendar year by peer leaders and peer educators.

Annex 2a (continued)

Intervention	Afghanistan		Bangladesh	
	Policy	Programme	Policy	Programme
11b. Nutrition assessment using BMI-for-age Z score growth charts	No	No	Yes **Operational Guideline for Implementation of the Package of Nutrition Interventions for Adolescents at Secondary Schools, 2019** Recommends weight and height monitoring at the beginning of the school calendar year by peer leaders and peer educators. <https://stage-adolescent-health.dnet.org.bd/uploads/policy_guideline/1622537604_OperationalGuidelinesforAdolescentnutritioninterventionforSchool-English.pdf>	Yes (in some geographies)
12. Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)	No	No	Yes **Second National Plan of Action for Nutrition, 2016–2025** Provides for a school stipend for all school-going adolescents belonging to poor and vulnerable households. **National Nutrition Policy, 2015** Aims to ensure adequate nutrition for disadvantaged groups, adopt nutrition programmes targeting people living in poor rural and urban areas identified through surveillance. Special targeting for those who have limited access to food and are unable to earn. <https://faolex.fao.org/docs/pdf/bgd152517.pdf>	Yes (universal) **Secondary Education Stipend Programme** Covers students in Grades 6–10 (secondary education) living in poor households (preferential coverage for girls). The stipend yearly benefit rates vary by grade and is paid biannually: Grade 6 – BDT1,380; Grade 7 – BDT1,380; Grade 8 – BDT1,620; Grade 9 – BDT2,040; Grade 10 – BDT2,790. **Higher Secondary Stipend Programme** Provides for stipends that vary according to the study area (preferential coverage for girls).

Abbreviations and acronyms: BDT: Bangladeshi taka; BMI: body mass index; g: gram; IFA: iron and folic acid; kcal: kilocalorie; mcg: microgram; mg: milligram; MoE: Ministry of Education; MoPH: Ministry of Public Health; WIFA: weekly iron and folic acid.

Annex 2b: Policies and programmes reviewed in Bhutan and India

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
1. School meals	Yes **National Nutrition Strategy and Action Plan, 2021–2025** Aims to optimize school meals using Plus School Menu, incorporating food fortification, and to strengthen linkages to local farmers to ensure nutritional requirements. <www.moh.gov.bt/wp-content/uploads/ict-files/2021/08/National-Nutrition-Strategy-and-Action-Plan.pdf>	Yes (universal) **National School Feeding and Nutrition Programme** Provides school meals to primary and secondary schoolchildren. Breakfast, lunch and dinner for boarding students and breakfast and lunch for day students. Egg is provided three times per week. <www.education.gov.bt/wp-content/uploads/2022/01/SFNP.pdf>	Yes **National Nutrition Strategy, 2017** Aims to improve access to nutritional support through midday meals in schools and through SAG, the scheme for out-of-school adolescent girls.	Yes (universal) **PM POSHAN scheme (earlier known as Mid-Day Meal Scheme, 1995)** Provides a hot cooked meal for 200 days, comprising 450 kcal and 12 g protein, 3.5 mg iron and 50 mcg folate for primary school students and 700 kcal and 20 g protein, 5.5 g iron and 75 mcg folate for upper primary students. <https://pmposhan.education.gov.in/Files/Guidelines/2023/Guidelines%20on%20PM%20POSHAN%20SCHEME.pdf>
2. Weekly iron and folic acid (WIFA) supplementation	Yes **Bhutan Every Newborn Action Plan, 2016–2023** Aims to provide IFA supplementation to women of reproductive age and adolescent girls as part of preconception nutrition care. <www.unicef.org/bhutan/media/206/file/BhutanEveryNewbornActionPlan.pdf>	Yes (universal) **School Health Programme** Provides schoolchildren with IFA supplements every Thursday, also referred to as 'iron Thursday'. **Adolescent Health Programme (Youth Friendly Health Services)** Provides weekly IFA supplements at community and basic health unit level (outreach clinics). <www.moh.gov.bt/wp-content/uploads/moh-files/yfhsGuide.pdf>	Yes **National Nutrition Strategy 2017** Aims to address micronutrient deficiencies, including anaemia, and improve adolescent health and nutrition by reaching girls in school and out of school with health check-ups, IFA supplementation, deworming, health and nutrition counselling and screening.	Yes (universal) **Anaemia Free India Programme and Rashtriya Kishore Swasthya Karyakram** Provides one IFA tablet weekly to all adolescents aged 10–19 years. School-going girls and boys receive tablets at school. Out-of-school girls and boys receive tablets at Anganwadi centres. Dosage: Each tablet contains 60 mg elemental iron + 500 mcg folic acid.

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
3. Preventive deworming (context-specific)	Yes **Bhutan Every Newborn Action Plan, 2016–2023** Provides for adolescent girls to undergo deworming as part of preconception nutrition care.	Yes (universal) **School Health Programme** Provides deworming tablets to all schoolchildren once a year. **Adolescent Health Programme (Youth Friendly Health Services)** Provides biannual deworming to adolescents at community and basic health unit level (outreach clinics). <www.moh.gov.bt/wp-content/uploads/moh-files/yfhsGuide.pdf>	Yes **National Nutrition Strategy, 2017** Aims to address micronutrient deficiencies, including anaemia, and improve adolescent health and nutrition by reaching girls in school and out of school with health check-ups, IFA supplementation, deworming, health and nutrition counselling and screening.	Yes (universal) **Anaemia Free India Programme** Provides biannual dose of 400 mg albendazole (one tablet) to all adolescents aged 10–19 years. School-going girls and boys receive tablets at school. Out-of-school girls and boys receive tablets at Anganwadi centres. **National Deworming Day Programme** Held biannually on 10 February and 10 August.
4a. Nutrition and health education in schools and beyond	Yes **National Nutrition Strategy and Action Plan, 2021–2025** Includes a social and behavioural change communication strategy to improve dietary and health practices of schoolchildren. It also seeks to strengthen and expand the Youth Friendly Health Services to deliver nutrition services that include nutrition education on a balanced diet and signs and symptoms of common nutritional deficiencies.	Yes (universal) **School Health Programme** Provides for a health education curriculum in schools that includes chapters on food and nutrition. <www.education.gov.bt/wp-content/uploads/2021/09/A-Guidebook-for-School-Health-Cooerdinators-2007.pdf> **Adolescent Health Programme** Provides nutrition counselling at both community and facility level (dedicated clinics) through the Youth Friendly Health Services. <www.moh.gov.bt/wp-content/uploads/moh-files/yfhsGuide.pdf>	Yes **National Nutrition Strategy, 2017** Aims to address micronutrient deficiencies, including anaemia, and improve adolescent health and nutrition by reaching girls in school and out of school with health check-ups, IFA supplementation, deworming, health and nutrition counselling and screening.	Yes (universal) **School Health and Wellness Programme, 2020, under Ayushman Bharat** Provides age-appropriate information on health and nutrition to Grades 6–12. Nutrition information includes nutritional needs of adolescents, different food groups, locally available sources, balanced diet, malnutrition and the myths related to nutrition and the causes, prevention and management of anaemia. **Rashtriya Bal Swasthya Karyakram** Provides nutrition education and counselling to both boys and girls aged 10–19 years at Anganwadi centres during Adolescent Health Day.

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
				Scheme for Adolescent Girls under the national flagship programme, Saksham Anganwadi and Poshan 2.0 (National Nutrition Mission) Provides nutrition and health education to adolescent girls aged 14–18 years at Anganwadi centres and Adolescent Friendly Health Clinics but only in limited geographies.
4b. Nutrition chapters in school education curriculum	Yes **National Policy and Strategic Framework on Control and Prevention of Non-Communicable Diseases, 2009** Provides key actions to support healthy diets, including developing education materials for schools (curricula) aimed at enhancing the practice of a healthy diet in children of all ages by the Ministry of Education in collaboration with the Ministry of Health (MoH). <https://extranet.who.int/ncdccs/Data/BTN_B3_National-Policy-and-Strategic-Framework-on-Prevention-and-Control-of-NCD-.pdf> **National Adolescent Health Strategic Plan, 2013–2018** Aims to include health education (including healthy eating and nutrition) in both curricular and co-curricular activities in the formal and non-formal education sectors. <https://extranet.who.int/mindbank/item/4434>	Yes (universal) **Adolescent Health Program** Aims to address several health issues including nutrition and micronutrient deficiencies in adolescents. <www.moh.gov.bt/about/who-is-who/dept-of-public-health/ncdd/adolescent-health-program> **School Health Programme** Provides for a health education curriculum in schools that includes chapters on food and nutrition. <www.education.gov.bt/wp-content/uploads/2021/09/A-Guidebook-for-School-Health-Cooerdinators-2007.pdf>	Yes **National Nutrition Strategy, 2017** Aims to include nutrition education in the school curriculum and in colleges.	Yes (universal) **Eat Right School Programme, 2017** Integrates nutrition ('yellow book') in the school curriculum to inculcate right eating habits. <https://ncert.nic.in/pdf/announcement/Training_Resource_Material_english.pdf> <https://eatrightindia.gov.in/eatrightschool/learning-books> <https://ncert.nic.in/healthandwell.php>

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond	Yes **National Nutrition Strategy and Action Plan, 2021–2025** Implements the required physical activity recommendations, including sports, as part of the school curriculum. **National Policy and Strategic Framework on Control and Prevention of Non-Communicable Diseases, 2009** Provides a key action to support physical activity by developing education materials for schools (curricula) that aim at encouraging physical activity in children of all ages and for MoE and MoH to provide supportive environments.	Yes (universal) **School Sports Programme** Promotes sports day in schools. **Health and Physical Education** Provides for a health and physical curriculum in schools to promote holistic development, including physical, mental, emotional, spiritual and social dimensions. <https://rec.gov.bt/health-and-physical-education>	Yes **National Education Policy, 2020** Emphasizes sports and physical education as part of the curriculum. **Fit India School, 2019** Emphasizes promotion of sports and physical activity in schools across the country. <https://fitindia.gov.in/fit-india-school-week-2022>	Yes (universal) **School Health and Wellness Programme under Ayushman Bharat, 2020** Provides physical education for all and promotes yoga and meditation by providing classes along the lines of International Yoga Day for middle and high school students. **Khelo India, 2018** Provides for physical fitness for school-going children. **Fit India School, 2019** Celebrates Fit India School Week four to six days in a week through various activities, such as debates, quiz, essay writing, poster-making competitions, yoga and meditation, pledge of fitness and indigenous sports.
6. Screen time (<120 minutes/day)	Yes **Bhutan Physical Activity Guideline, 2011, Ministry of Health** Recommends that children and adolescents spend less than one hour a day using electronic media for entertainment, such as television, computer games or internet. <www.moh.gov.bt/wp-content/uploads/moh-files/2014/11/National-Physical-Activity-guidelines-.pdf>	No	No	No

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
7. Restrictions on television advertising for unhealthy foods	Yes Aims to regulate unhealthy food and beverages advertising on national television channels but does not cover international channels.	No	Yes **National Multisectoral Action Plan for Prevention and Control of Common Non-communicable Diseases, 2017–2022** Aims to regulate advertisement of foods high in fats, salt and sugar and sugar-sweetened beverages to reduce exposure to children.	No
8. Unhealthy food and beverage taxes	Yes **The Multisectoral National Action Plan for the Prevention and Control of Noncommunicable Diseases, 2015–2020** Proposes increased taxation (GST) on unhealthy products, including tobacco and unhealthy foods and beverages. <www.moh.gov.bt/wp-content/uploads/moh-files/2015/12/The-Multisectoral-National-Action-Plan-for-the-Prevention-and-Control-of-NCDs-2015-2020.pdf>	No	Yes **National Multisectoral Action Plan for Prevention and Control of Common Non-communicable Diseases, 2017–2022** Proposes raised taxes under GST on food high in fats, sugar and salt and non-alcoholic sugar-sweetened beverages to reduce consumption.	No
9. Nutrition front-of-pack labelling	Yes **The Multisectoral National Action Plan for the Prevention and Control of Noncommunicable Diseases, 2015–2020** Proposes developing nutrition labelling.	No	No	No

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
	Food Rules and Regulations, 2017 Regulates food labelling as per the guidelines of the Codex Alimentarius Commission. Provides for the mandatory nutrient declaration of pre-packaged foods (energy, protein, carbohydrate, fat, saturated fat, sodium and total sugars).			
10. Ban on marketing and sale of junk food in and around school premises	No	No	Yes **Food Safety and Standards (Safe food and healthy diets for School Children) Regulations, 2020** Restricts sale of food products high in saturated fat or trans fat or added sugar or sodium on school campus or to schoolchildren in an area within 50 metres from the school gate in any direction. <www.fssai.gov.in/upload/uploadfiles/files/Gazette_Notification_Safe_Food_Children_07_09_2020.pdf>	Yes (universal) **Eat Right School Programme** Serves as a monitoring and evaluation tool designed to foster a safe and wholesome environment for children from an early age and ensures that schools adhere to standards promoting healthy eating habits and food safety practices, contributing to the overall well-being of students.
11a. Nutrition assessment (height, weight, haemoglobin)	Yes	Yes (universal) **Adolescent Health Programme** Promotes growth and development monitoring (height, weight, BMI, haemoglobin estimation) at schools, outreach clinics and district hospitals. <www.moh.gov.bt/about/who-is-who/dept-of-public-health/ncdd/adolescent-health-program>	Yes	Yes **Rashtriya Kishore Swasthya Karyakram** Provides for an assessment of nutritional status (BMI, anaemia testing) for both girls and boys aged 10–19 years at Adolescent Friendly Health Clinics during Adolescent Health Day.

Annex 2b (continued)

Intervention	Bhutan		India	
	Policy	Programme	Policy	Programme
				Rashtriya Bal Swasthya Karyakram Provides for government and government-aided school-based screening of children aged 6 to 18 years by dedicated mobile health teams, including height, weight and mid-upper arm circumference.
11b. Nutrition assessment using BMI-for-age Z score growth charts	No	No	No	No
12. Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)	No	No	Yes **National Nutrition Strategy, 2017** Ensures access to household food security, social protection systems and safety nets.	Yes (in some geographical areas) **Scheme for Adolescent Girls under the national flagship programme, Saksham Anganwadi and Poshan 2.0 (National Nutrition Mission)** Provides supplementary nutrition containing 600 calories, 18–20 g of protein and micronutrients to adolescent girls aged 14–18 years in the form of take-home rations for 300 days a year only in the aspirational districts [those affected by poor socioeconomic indictors] in the states, including Assam and North Eastern States.

Abbreviations and acronyms: BMI: body mass index; g: gram; IFA: iron and folic acid; kcal: kilocalorie; mcg: microgram; mg: milligram; MoE: Ministry of Education; MoH: Ministry of Health; WIFA: weekly iron and folic acid.

Annex 2c: Policies and programmes reviewed in Maldives and Nepal

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
1. School meals	Yes **Education Act, 2020** Provides for breakfast in public schools.	Yes (universal) **School Breakfast Programme, 2019** Provides breakfast to students that are most in need in government schools.	Yes **Multi Sector Nutrition Plan-II 2018–2022; School Education Sector Plan, 2021–2030; and Free and compulsory Education Act, 2018** Provides for diversified and nutritious midday meals to children. **School Education Sector Plan, 2022/23–2031/32** Provides for midday meals in schools to support the nutritional status and basic-level health of children.	Yes (universal) **National School Meals Programme, 2002** Provides midday meals for early childhood education and development students and school-aged children (both girls and boys) until Grade 6. Note: In 2023, the President of Nepal addressed Parliament regarding the expansion of the midday meal to higher classes (up to Grade 8).
2. Weekly iron and folic acid (WIFA) supplementation	No	No	Yes **Joint Action Plan, 2071/72–2076/77** Provides for IFA supplementation to adolescent schoolchildren (Grades 6–10)	Yes (universal) **Weekly Iron Folic Acid Supplementation (WIFAS) Programme, 2016** Administers IFA tablets to in-school and out-of-school adolescent girls aged 10–19 years through schools and facilities, respectively; one tablet of 60 mg elemental iron and 400 mcg folic acid each for a period of 26 weeks in a given year. **School Health and Nutrition Programme** Administers IFA tablets to adolescent girls in schools.

Annex 2c (continued)

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
3. Preventive deworming (context-specific)	NA	NA	Yes **Joint Action Plan, 2071/72–2076/77** Provides for the biannual supplementation of deworming tablets to schoolchildren in Grades 1–10 attending private and public schools in all 77 districts.	Yes (universal) **School Health and Nutrition Programme** Distributes deworming tablets biannually to schoolchildren in Grades 1–10.
4a. Nutrition and health education in schools and beyond	Yes **National Food Safety Policy, 2017–2026** Aims to empower young people and adults to adopt healthy choices on food and physical activity and prevent tobacco use and substance abuse through education and life skill development. **Health Promoting Schools Policy, 2004, and School Health Policy, 2010** Provides for age-appropriate nutrition education. **Integrated National Nutrition Strategic Plan, 2013–2017** Recommends providing nutrition advice and information to adolescent girls and young women in secondary schools and higher education institutions through nutrition camps to improve their nutritional status. **School Nutrition Education Initiatives** **Health Master Plan, 2016–2025**	Yes (universal) **School Health Programme, 1986** Provides nutrition and health education in schools as part of the school curriculum. **Adolescent and Youth Friendly Health Services** (some geographical areas) Gives information on nutrition services provided at health facilities.	Yes **Multi Sector Nutrition Plan-II, 2018–2022** Aims to revitalize the School Health and Nutrition/ Weekly Iron Folic Acid Supplementation programme to include promoting healthy dietary habits and physical activities to improve the nutritional status of adolescents. **School Health and Nutrition Strategy, 2006** Aims to enhance students' knowledge and skills through behaviour-centred sessions on various topics, including nutrition, at least once a week. **National Nutrition Strategy 2019 and Implementation Plan, 2020–2024 (BS 2077/78–2081/82)** **Operational guideline on nutrition for adolescent girls and boys, BS 2076 (community and school)**	Yes (universal) **School Health and Nutrition Programme, 2006** Provides health and nutrition education in line with the School Health and Nutrition Strategy.

Annex 2c (continued)

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
4b. Nutrition chapters in school education curriculum	Yes **Health Promoting Schools Policy, 2004** Recommends incorporating health education, which also includes nutrition, in overall school curriculum. **Integrated National Nutrition Strategic Plan, 2013–2017** Aims to develop skill-based nutrition education modules targeting key stages of learning that is aligned to the national curriculum and to train schoolteachers as part of secondary teacher training to conduct nutrition education interventions. <https://hpa.gov.mv/wp-content/uploads/2023/04/Integrated-National-Nutrition-Strategic-Plan-2013-2017.pdf>	Yes (universal) **The National Curriculum Framework, 2014, and School Health Programme** Provides for health and well-being to be integrated as a core subject in the national school education curriculum, under which healthy eating and nutrition are also covered. <https://ied.gov.mv/storage/uploads/Bdoda5wp/3p6afeao.pdf>	Yes **Multi Sector Nutrition Plan-II, 2018–2022** Aims to revise the health and nutrition curriculum.	Yes (universal) **Food and Nutrition Chapter in Grade 11 and 12 Curriculum** Implements five-hour study period for Grade 11 and Grade 12 (optional). **Age-specific nutrition-related content available in Grades 1–12 curriculum.** No dedicated grade book on nutrition available at school level.
5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond	Yes **Health Promoting Schools Policy, 2004** Promotes activities and sports coordinated with the health components covered in the curriculum. **Integrated National Nutrition Strategic Plan, 2013–2017** Provides for the opportunity for physical activity and sports through regular school sessions for secondary school students.	Yes (universal) **The National Curriculum Framework, 2014** Includes health and physical education in the second national curriculum for Grade 1 to 6. <https://nie.edu.mv/wp-content/uploads/2023/09/National-Curriculum-Framework.pdf>	Yes **Multi Sector Action Plan on the Prevention and Control of NCD in Nepal, 2021–2025** Promotes physical exercise, yoga and pranayama [breathing exercises] through school textbooks as well as extracurricular activities every Friday after school hours. **Multi Sector Nutrition Plan-II, 2018–2022** Aims to revitalize the School Health and Nutrition/Weekly Iron Folic Acid Supplementation programme to include promotion of healthy dietary habits and physical activities to improve the nutritional status of adolescents.	Yes (universal) **Module for Ayurveda and Yoga Education in School Programme**

Annex 2c (continued)

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
6. Screen time (<120 minutes/day)	Yes **Maldives Guidelines on Physical Activity for Health, 2022** Recommends sedentary recreational screen time to be limited to no more than 2 hours per day (this excludes screen time for educational purposes).	No	No	No
7. Restrictions on television advertising for unhealthy foods	No	No	Yes **Multisectoral Action Plan for Prevention and Control of Non-Communicable Diseases, 2014–2020** Aims to regulate ban on advertisement of unhealthy foods, along with alcohol and tobacco.	No
8. Unhealthy food and beverage taxes	Yes **Multi-sectoral Action Plan for the Prevention and Control of Noncommunicable Diseases in Maldives, 2016–2020** Recommends the Ministry of Economic Development to tax unhealthy food products, along with tobacco and alcohol. **Export-Import Act 18th Amendment Act, 2020** Provides for taxes on energy drinks and soft drinks to be nearly doubled to MVR60 per litre and MVR8 per litre (only on imported products).	No	Yes **National Nutrition Strategy, 2020, and Multisectoral Action Plan for Prevention and Control of Non-Communicable Diseases, 2014–2020** Aims to strengthen supportive policies and legislations to promote a healthy diet and establish regulations and fiscal policies, including taxes and subsidies, to promote consumption of fruits and vegetables and discourage consumption of unhealthy food options high in trans fat, simple sugar and salt as well as unhealthy preservatives and additives.	No
9. Nutrition front-of-pack labelling	No	No	No	No

Annex 2c (continued)

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
10. Ban on marketing and sale of junk food in and around school premises	No	No	Yes **Multisectoral Actions Plan for Prevention and Control of Non-Communicable Diseases, 2014–2020** Legislates the ban on food products high in trans fat/saturated fat, including sale around school premises and use for catering services. **Manual on school midday meal management** Discourages junk food as midday meal and includes 60 local menus for 10 different geographical locations in Nepal. It promotes local agricultural production.	No
11a. Nutrition assessment (height, weight, haemoglobin)	Yes **Integrated National Nutrition Strategic Plan, 2013–2017** Plans to conduct nutrition camps targeting adolescent girls and young women in secondary schools and higher education institutions and monitor their nutritional status, including anaemia status. <https://extranet.who.int/ncdccs/Data/MDV_B14_18.%20Integrated%20National%20Nutrition%20Strategic%20Plan.pdf>	Yes (universal) **Health Promoting Schools Programme, 2004** Provides nutritional assessments, such as height and weight at least once a year, of schoolchildren, the results of which are given to parents. <https://healtheducationresources.unesco.org/library/documents/health-promoting-schools-policy>	Yes **School Health and Nutrition Strategy, 2006** Provides for an annual check-up at the beginning of the educational session, including an anthropometric assessment, along with other health check-ups of schoolchildren with the support from local health services.	Yes (universal) **School Health and Nutrition Programme, 2006** Provides annual physical check-ups, including measuring height and weight to assess nutritional status by school teachers, with assistance from health service providers.

Annex 2c (continued)

Intervention	Maldives		Nepal	
	Policy	Programme	Policy	Programme
11b. Nutrition assessment using BMI-for-age Z score growth charts	No	No	No	No
12. Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)	No	No	Yes **National Education Policy, BS 2076** Recommends offering scholarships to girls.	Yes (universal) **Food for Education Programme** Provides take-home rations to pre-primary and primary school students in three remote districts of Sudur Paschim Province, supported by the World Food Programme. **Girls' scholarship Scheme** Provides girls in Grades 1–8, who are sheltering in feeder hostels (full-time boarders), NPR40,000 per year.

Abbreviations and acronyms: BMI: body mass index; cm: centimetre; BS: Bikram Sambat (solar calendar used in Nepal); g: gram; IFA: iron and folic acid; ml: millilitre; IFA: iron and folic acid; MVR: Maldivian rufiyaa; NA: not applicable; NPR: Nepalese rupee; WIFA: weekly iron and folic acid.

Annex 2d: Policies and programmes reviewed in Pakistan and Sri Lanka

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
1. School meals	Yes **Pakistan Multi-Sectoral Nutrition Strategy, 2018–2025** Aims to improve and scale up the school meal programme.	Yes (in some geographies) **School Meal Program in Islamabad Government Schools, 2022** Covers a programme for primary schools funded by a non-governmental organization.	Yes **National Nutrition Policy, 2017–2030** Aims to streamline and expand the school midday meal programme to cover one third of the daily caloric requirement of primary school children and expand the school midday meal programme to adolescents in all targeted schools.	Yes (universal) **School Health and Nutrition Programme, 1931** Covers the following programmes: **National School Meal Programme, 2002** Provides a morning meal to children in Grades 1–5. **Milk Programme, 2002** Provides a glass of fresh milk or 150-ml milk packet to children in Grades 1–5, five days a week. **Food for Education Programme, 2003** Provides meals to children in Grades 1–9 in the Northern and Eastern provinces, supported by the World Food Programme and government.
2. Weekly iron and folic acid (WIFA) supplementation	Yes **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–25**	Yes (in some geographies)	Yes **National Strategy for Prevention and Control of Micronutrient Deficiencies in Sri Lanka, 2017–2022** Revisits and updates the policies, legislations and guidelines on micronutrient supplementations for children aged 6–59 months, pregnant and lactating women, adolescent girls and non-pregnant women based on evidence-based recommendations.	Yes (universal) **School Health Programme, 1918** Provides weekly IFA to all schoolchildren and adolescents in Grades 1–13 (60 mg iron and 400 mcg folic acid), along with weekly 100 mg ascorbic acid for 6 months continuously per annum.

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
3. Preventive deworming (context-specific)	Yes **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025**	Yes (universal) **School-based programme** Mass campaign during deworming week.	NA	NA
4a. Nutrition and health education in schools and beyond	Yes **Pakistan Multi-sectoral Nutrition Strategy, 2018–2025** Integrates nutrition education messages into school curriculum, including promotion of healthy foods, child care best practices and good hygiene and sanitation. **Pakistan Adolescent Nutrition Strategy and Provincial Implementation Plans** Recommends nutrition education to improve adolescent nutrition.	Yes (in some geographies)	Yes **National Nutrition Policy, 2017–2030** Aims to promote healthy dietary practices at home and in school, including implementation of healthy school canteen guidelines.	Yes (universal) **School Nutrition Programme, 1931** Provides 13 nutrition messages to all children during mealtime. **Community-based nutrition awareness programme for children and adolescents through mother support groups and youth groups** Raises nutrition awareness and promotes locally available nutritious foods for both boys and girls aged 0–19 years.
4b. Nutrition chapters in school education curriculum	Yes **Integrated Action Plan for Reduction of Dietary Risks of NCDs in Pakistan, 2022–2025** Provides for a module on healthy foods in the syllabus of schoolchildren.	Yes (in some geographies)	Yes **National Nutrition Policy, 2017–2030** Streamlines the school health programme, including age-appropriate health and nutrition education for schoolchildren and adolescents. Provides for the monitoring of indicators or targets by 2030, including appropriate health and nutrition education incorporated in the curriculum for primary schoolchildren and school-going adolescents.	Yes (universal) **National Strategic Plan on Adolescent and Youth Health, 2018–2025** Provides for certain aspects of adolescent health, including life skills, nutrition and reproductive health, to be included in the school curriculum. <https://drive.google.com/file/d/1JWYHxEZ48WsYdmlTTanMhm-m9wjrWEXEx/view>

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
			National Strategic Plan on Adolescent and Youth Health, 2018–2025 Advocates the Ministry of Education to include lessons on healthy eating, nutrition, nutritional assessments, physical activity and gardening in the school curricula.	**Food and nutrition education in primary schools** Grades 1–2: Food groups and their benefits and the concept of food hygiene. Grade 3: Nutrition concepts, such as balanced diet and good food habits, are introduced to a small extent. Grades 4–5: Maintenance of healthy body weight, food preparation, food advertising, food safety and hygiene and health issues associated with unhealthy food patterns (both theoretical and practical lessons).
5. Physical activity (≥60 minutes of moderate-vigorous intensity physical activity/day) in schools and beyond	Yes **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025** Introduces structured sports and physical activity in schools, communities and workplaces through mandatory park and sport facilities and encourages routine physical activity, such as walking and cycling, for both girls and boys.	No	Yes **National Nutrition Policy, 2017–2030** Provides for a key action to promote playing/physical activity in all appropriate settings (e.g., schools, home). Provides for monitoring of indicators or targets by 2030, including all primary school children and adolescents engaged in playing/physical activities at least 60 minutes per day, and availability of primary school curriculum that includes 3 hours of physical activities per week. **National Strategic Plan on Adolescent and Youth Health, 2018–2025** Advocates the Ministry of Education to include lessons on healthy eating, nutrition, nutritional assessments, physical activity and gardening in the school curricula.	Yes (universal) **National Strategic Plan on Adolescent and Youth Health, 2018–2025** Includes health and physical education and other health-related subjects in the school curricula. Sports and other extracurricular activities are also encouraged in schools to promote physical health. <https://drive.google.com/file/d/1JWYHxEZ48WsYdmlTTanMhm-m9wjrWEXEx/view>

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
6. Screen time (<120 minutes/day)	No	No	Yes **Food-based dietary guidelines** Recommends limiting time spent sedentary, particularly the amount of screen time. <https://nutrition.health.gov.lk/english/resource/1317>	No
7. Restrictions on television advertising for unhealthy foods	No	No	Yes **National Nutrition Policy, 2017–2030** Provides for a key action to control unethical marketing through a robust legislative mechanism to streamline implementation of the existing mechanism, including a nutrient profile model to regulate the promotion of unhealthy food.	Yes **Food (Labelling and Advertising) Regulations, 2022** Food and beverages should not be promoted to children under 12 years old and representations of children under 12 years old must not feature in advertisements for these products.
8. Unhealthy food and beverage taxes	Yes **Integrated Action Plan for Reduction of Dietary Risks of NCDs in Pakistan, 2022–2025** Recommends enactment of higher tax on sugar-sweetened beverages and processed foods high in salt. **Ministry of National Health Services, Regulation and Coordination Healthy Levy** Provided for 1% tax on all sugar-sweetened beverages (PKR1 on 250 ml) in 2019. Increased federal excise duty of 20% on carbonated beverages and 10% on sugary juices, syrups and squashes in 2023.	Yes (in some geographies)	Yes **National Nutrition Policy, 2017–2030** Provides for the adoption of appropriate financing strategies to promote healthy food behaviours. An action area is to increase taxation of unhealthy foods.	Yes **Sugar Tax on Sugar-Sweetened Beverage, 2017** Lowered the tax (specific excise tax) in 2018 to LKR 0.30 per g sugar on carbonated soft drinks, energy and fruit drinks and cereal-based drinks.

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
9. Nutrition front-of-pack labelling	No	No	Yes **National Nutrition Policy, 2017–2030** Streamlines implementation of the existing mechanism, including nutrient profile model, to regulate the promotion of unhealthy food. **Food (colour coding for sugar levels) Regulations, 2016** **Food (colour coding for sugar, salt and fat) Regulations, 2019** <http://eohfs.health.gov.lk/food/images/pdf/regulations/Colour-coding-solids-English.pdf>	Yes (universal) **Mandated traffic light labels** **Food (colour coding for sugar levels) Regulations, 2016** For beverages only: Red label: >11 g sugar/100 ml; Amber label: 2–11 g; Green label: <2 g **Food (colour coding for sugar, salt and fat) Regulations, 2019** For packaged foods: Red label: >22 g of sugar/100 g, 1.25 g of salt/100 g, 17.5 g of fat/100 g; Amber label: 8–22 g sugar, 0.25–1.25 g salt, 3–17.3 g fat; Green label: <8 g sugar, <0.25 g salt, <3 g fat
10. Ban on marketing and sale of junk food in and around school premises	Yes **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025** Prohibits sale of unhealthy snacks, energy drinks and soft drinks on school/college premises.	Yes (in some geographies) **School food regulations (Balochistan, Khyber Pakhtunkhwa, Punjab, Sindh)** Bans sale of soft drinks in and around schools and colleges. Papads and flavored snacks/chips are banned in Sindh.	Yes **National Nutrition Policy, 2017–2030** Establishes and implements legislation to regulate the availability of unhealthy food in close proximity to schools, including banning unhealthy food outlets near schools (200 metres). **School canteen policy, guidelines, 2007 (revised in 2015)** Prohibits sale of foods containing (i) saturated or trans fats, such as processed meat and products, pastries and puffs, deep fried foods; (ii) sugary foods, such as chocolates, chocolate products, sweetened beverages, cakes with icing, biscuits, energy drinks; and (iii) salty foods, such as salted nuts, pickles, soup cubes, instant noodles.	Yes

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
11a. Nutrition assessment (height, weight, haemoglobin)	Yes **Pakistan Adolescent Nutrition and Supplementation Guidelines, 2020** Recommends screening adolescents in schools and health facilities and to enrol in programmes in communities where they will be assessed and provided counselling. **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025** Recommends conducting periodic screening of students of madrassahs and formal, non-formal and informal schools to assess nutritional status.	Yes (in some geographies) **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025** <www.unicef.org/pakistan/media/2846/file/Pakistan%20Adolescent%20Nutrition%20Strategy.pdf>	Yes **National Strategic Plan on Adolescent and Youth Health, 2018–2025** Advocates the Ministry of Education to include lessons on healthy eating, nutrition, nutritional assessments, physical activity and gardening in the school curricula.	Yes **School Nutrition Programme** Provides for a public health inspector to take the height and weight of students to assess their nutritional status along with other health indicators during the annual school medical inspection.
11b. Nutrition assessment using BMI-for-age Z score growth charts	No	No	No	No

Annex 2d (continued)

Intervention	Pakistan		Sri Lanka	
	Policy	Programme	Policy	Programme
12. Nutrition-sensitive social protection (cash/ vouchers/food ration/ food supplements)	Yes **Pakistan Multi-Sectoral Nutrition Strategy, 2018–2025,** Aims to improve and scale up the school meal programme. **Pakistan Adolescent Nutrition Strategy and Operational Plan, 2020–2025** Aims to institute conditional cash transfer and food voucher schemes and link the cash transfers through BISP to increase secondary school enrolment and attendance.	Yes (in some geographies) **School Meal Programme in Islamabad Government Schools, 2022** Pilots WIFA supplementation + cash transfer to adolescent girls aged 10–19 years in six districts through community workers. **Waseela- e-Taleem Programme, 2012,** (under BISP, renamed as Benazir Taleemi Wazaif Programme) Provides quarterly cash grants to low-income families (only those who are beneficiaries of the existing BISP) for the education of children from primary to higher secondary level.	Yes **Universal Free Education Policy (introduced in 1945); Compulsory Education Policy, 1988**	Yes **Food for Education Programme, 2003** Provides meals for children in Grades 1–9, supported by the World Food Programme and the government, in the Northern and Eastern provinces.

Abbreviations and acronyms: BISP: Benazir Income Support Programme; BMI: body mass index; cm: centimetre; g: gram; IFA: iron and folic acid; ml: millilitre; IFA: iron and folic acid; NA: not applicable; PKR: Pakistani rupee; WIFA: weekly iron and folic acid.

Annex 3: Classification criteria of severity of system bottlenecks

System building block	Classification criteria of severity of bottleneck			
1. Legislation and policies	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
Have the policies/legislations been translated into a programme with operational guidelines (including financial guidelines, funded by government)? • *Is there a legislation/policy available to implement the intervention?* • *Has the legislation been translated into a programme with operational guidelines (including financial guidelines, funded by government)?*	Only a pronouncement has been made but no legislation (Act)/policy enacted.	Legislation/policy available and translated into programme but with no operational framework/ guidelines and grossly inadequate financial guideline to support implementation.	Legislation/policy available and translated into programme with an operational guideline in place but insufficient financial support to implement.	Legislation/policy available and translated into programme with an operational guideline in place with financial guidelines/budget to support implementation.
2. Leadership, governance, and coordination	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
***If* 'yes' for Q1,** is there leadership at national level to oversee targets and review the programme with institutional architecture and administrative governance to support implementation and collaboration within and across sectors/stakeholders/advocates/civil society? • *Is there a national level/highest level leadership and coordinating mechanism, which meets regularly to oversee targets and carry out a comprehensive progress review of the [programme]?* • *Are there administrative governance processes established for collaboration/consensus/stocktake in the implementation of the programme (within health sector, across sectors, across stakeholder groups)?* • *Is the institutional system/architecture in place to support programme implementation?* • *Are performance evaluation mechanisms in place and functional to establish accountability in the system?* • *Is there a presence of high-level advocates/civil society participation to ensure people's voices and accountability for duty bearers.*	Leadership and coordinating mechanism not in place for implementation.	Leadership and coordinating mechanism in place but two or more challenges in implementation of established processes and systems (regarding coordination, collaboration/ coalition, performance evaluation, advocacy).	Leadership and coordinating mechanism in place but at least one challenge in implementation of established processes and systems (regarding coordination, collaboration/ coalition, performance evaluation, advocacy).	Leadership and coordinating mechanism in place and being implemented (established processes and systems for coordination, collaboration/coalition, performance evaluation, advocacy).

Annex 3 (continued)

System building block	Classification criteria of severity of bottleneck			
3. Supplies	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
Are there national standards and policies in place with respect to procurement and supply of the required drugs and equipment for the interventions? Government-owned, financed and tracking and management of stock-outs? • *Are there national standards and policies in place with respect to the required drugs and equipment?* • *Is in-country procurement systems government owned and financed for procurement and delivery of commodities and supplies?* • *Are the procedures and mechanisms for storage and distribution of commodities and supplies for related interventions available at all levels of the health system?* • *Is there a system (logistics management information system/LMIS) in place to track and manage stock-outs of commodities and supplies at all system levels?*	Standard policies for drugs and equipment are not available and systems are non-functional/need to be effectively implemented.	Standard policies for drugs and equipment are in place but challenges are faced in two to three of the following areas: system for procurement, distribution and storage and systems to manage stock-outs.	Standard policies for drugs and equipment are in place with appropriate procurement systems but challenges exist in distribution and storage OR systems to manage stock-outs.	Standard policies for drugs and equipment are in place with a reliable system for procurement, distribution and storage, with equitable access at all levels and systems to manage stock-outs.
4. Budgets and financing	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
Are the programmes/interventions budgeted? If 'yes', is the budget allocated, disbursed efficiently and tracked and are there increased budgetary provisions over time? • *Is there a budget allocation line for the programme that includes all interventions?* • *Is the allocative efficiency sufficient and includes all aspects of programme systems to implement the interventions?* • *Is the disbursement efficient/adequate to cover disparities?* • *Are there processes instituted to support tracking allocation, disbursement and allocative efficiency and are the budgetary provisions increasing over time?*	No budget allocation line for interventions available.	Budget line available but challenges exist in sufficient allocation, disbursement and its tracking.	Budget line available, allocated sufficiently but challenges in efficient/ adequate disbursement and tracking.	Budget line for interventions available, efficiently and sufficiently allocated, efficiently disbursed and processes instituted for tracking, with increasing trend in provisions.

Annex 3 (continued)

System building block	Classification criteria of severity of bottleneck			
5. Data and information systems	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
Are data collected on these interventions from national surveys and/or national information systems? If 'yes', does the system include all relevant indicators and is used for programme monitoring/quality improvement? • *Are there specific goals/targets for coverage assigned at the national level for the intervention?* • *Are data on interventions collected from national surveys (e.g., Demographic and Health Survey or equivalent)?* • *Does the national information system (e.g., Health Management Information System) reporting include relevant indicators pertaining to the specific intervention?* • *Is the data quality maintained through timeliness, periodicity and consistency?* • *Are systems in place for use of data generated from reporting/monitoring for programme review/quality improvement/decision-making?*	National data and information systems are not in place, non-functional or data were collected no more than once.	Specific goals/targets for coverage are assigned, however, gaps exist in national surveys and/or national information systems to include relevant indicators. There are challenges in regular reporting, data quality and data use for decision-making.	Specific goals/targets for coverage are assigned and data collected through national surveys and/or national information systems on relevant indicators. However, there are some challenges in regular reporting, data quality OR data use for decision-making.	National coverage targets assigned and data collected through national surveys and/or national information systems. Data quality and systems are in place to ensure use of data.
6. Workforce	Significant bottleneck	Moderate bottleneck	Mild bottleneck	No bottleneck
Are there defined responsibilities of service providers at all levels and their supervisors for implementing the interventions? Do capacity building plans exist? Adequate numbers? • *Are there defined standard operation procedures/responsibilities of service providers and their supervisors at all levels for implementing the interventions?* • *Are at least 50% of staff trained at least once on implementation protocols in the last one year?* • *Is the level of vacancies of trained service providers available to deliver interventions less than 25%?* • *Are there functional mechanisms in place for regular assessment and quality improvement of service provider performance?*	Guidelines and operational plans are not well defined/do not exist at strategic level and operational level, with <25% staff trained and >50% vacancies.	Guidelines and operational plans for service providers are available but face challenges in implementation, along with two or more of the following: trained staff, level of vacancies and mechanism for performance assessment/quality improvement.	Guidelines and operational plans for service providers are available but face challenges in implementation, along with any one of the following: trained staff, level of vacancies or mechanism for performance assessment/quality improvement.	Guidelines for service providers available, >50% staff trained, <25% vacancies of service providers and functional mechanisms for performance assessment/quality improvement are in place.

Nutrition in Adolescent Girls and Barriers to Effective Policy Action in South Asia

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